

Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No.: 6115-58351, Page 1 of 103

FIG. 1

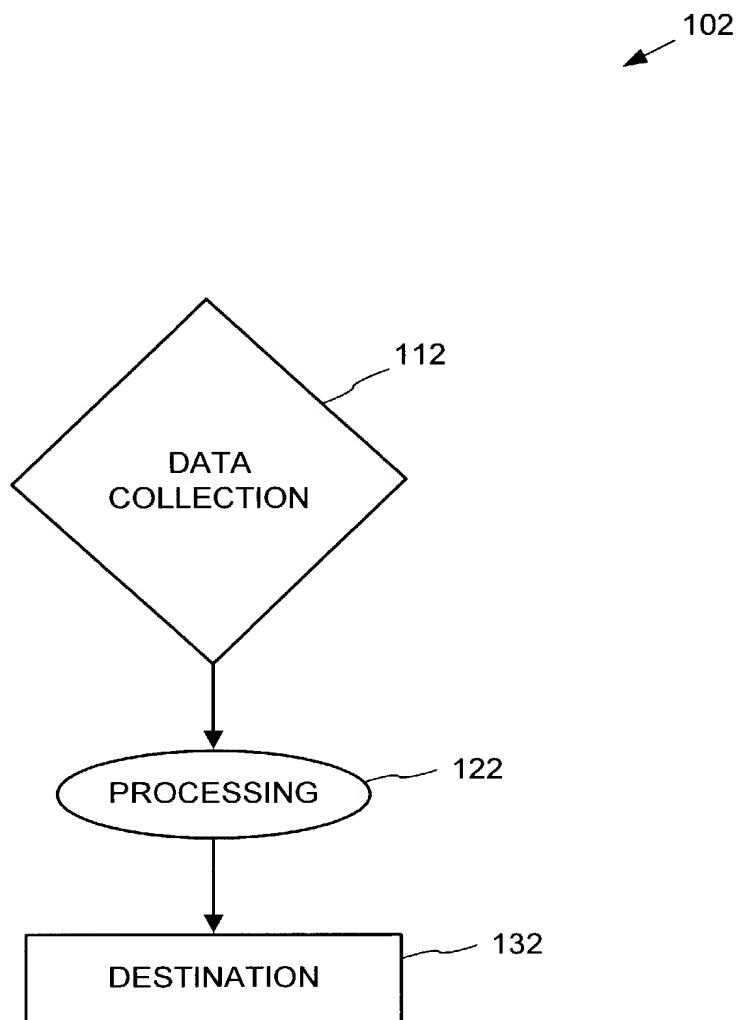


FIG. 2

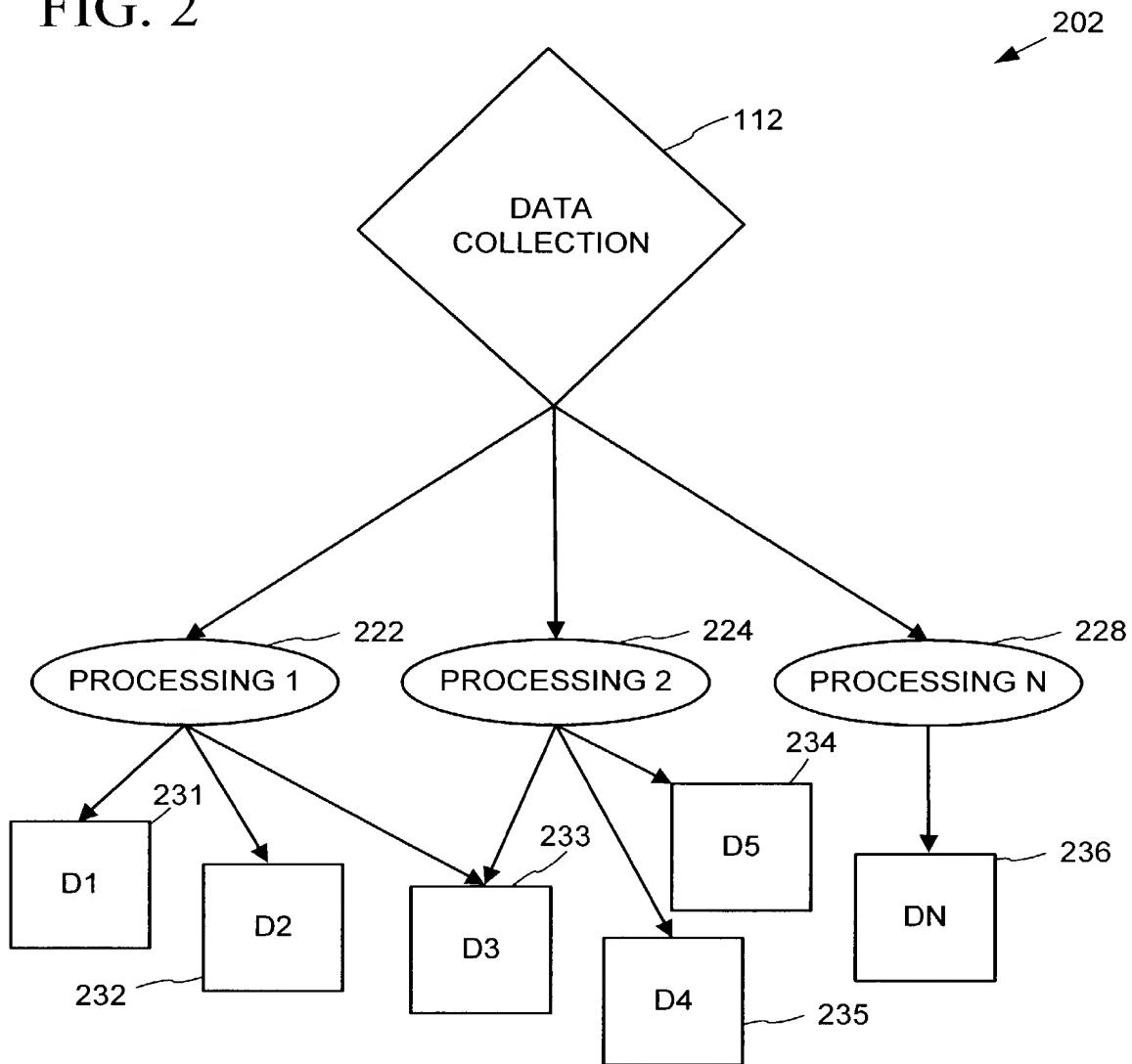


FIG. 3

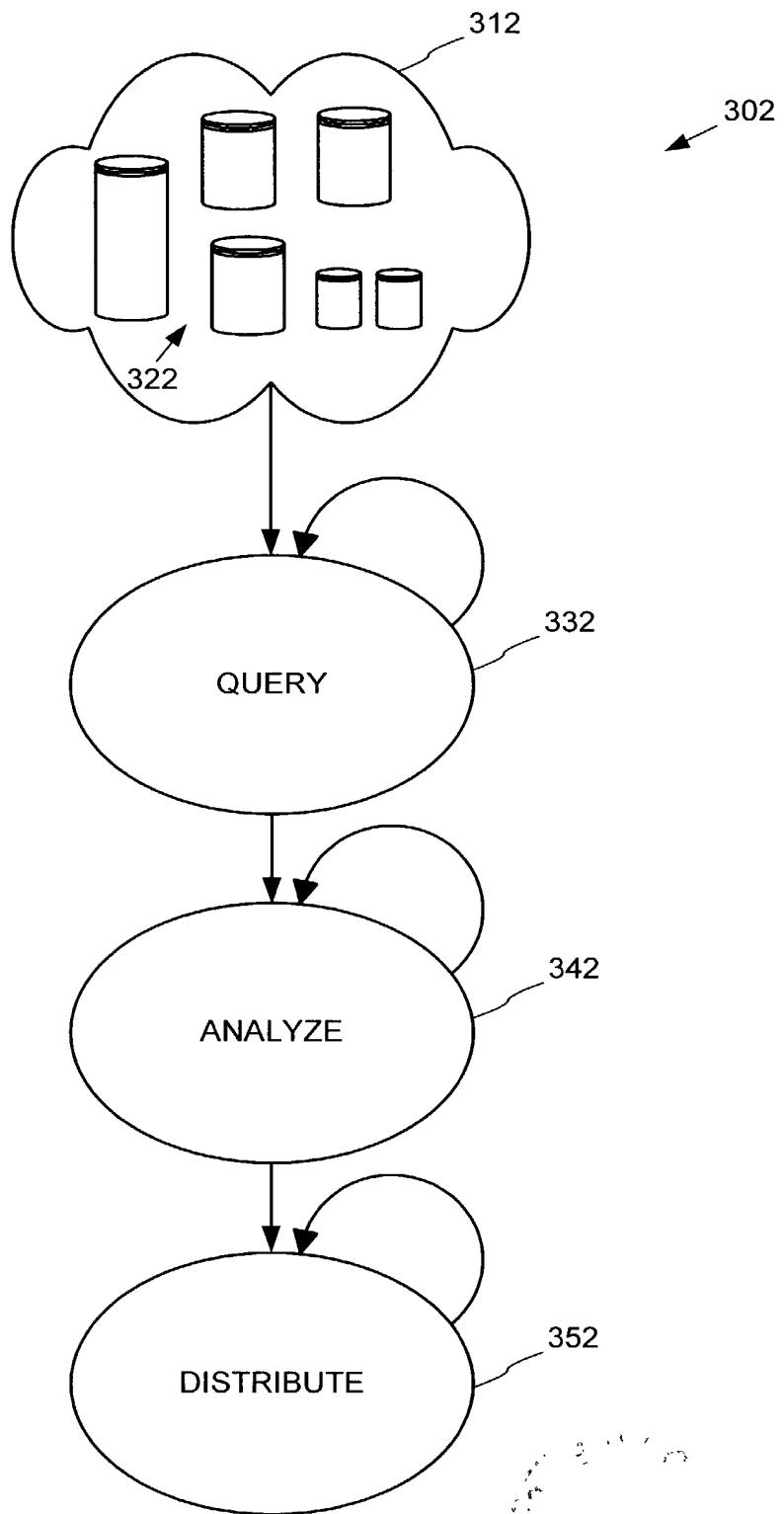


FIG. 4

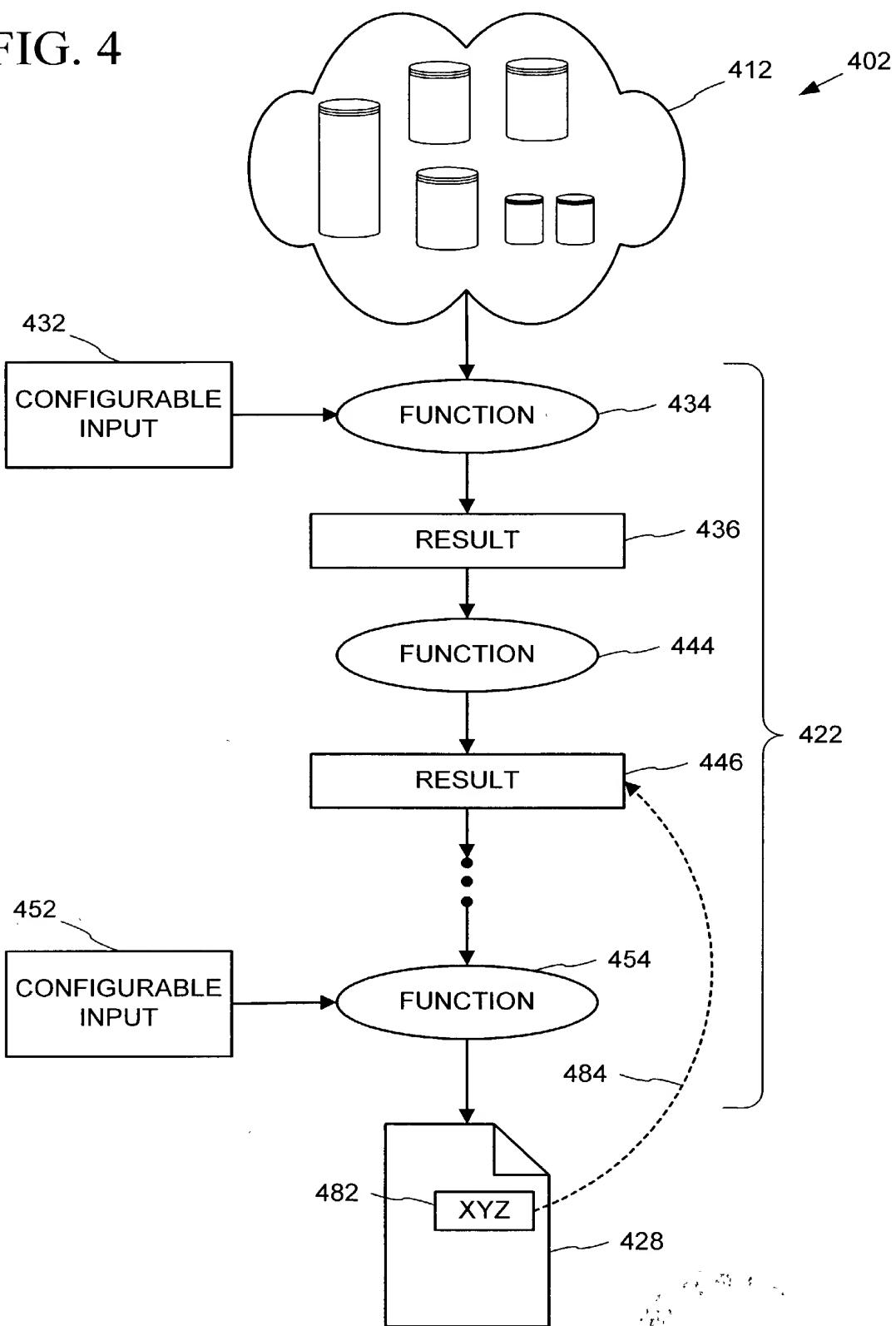


FIG. 5

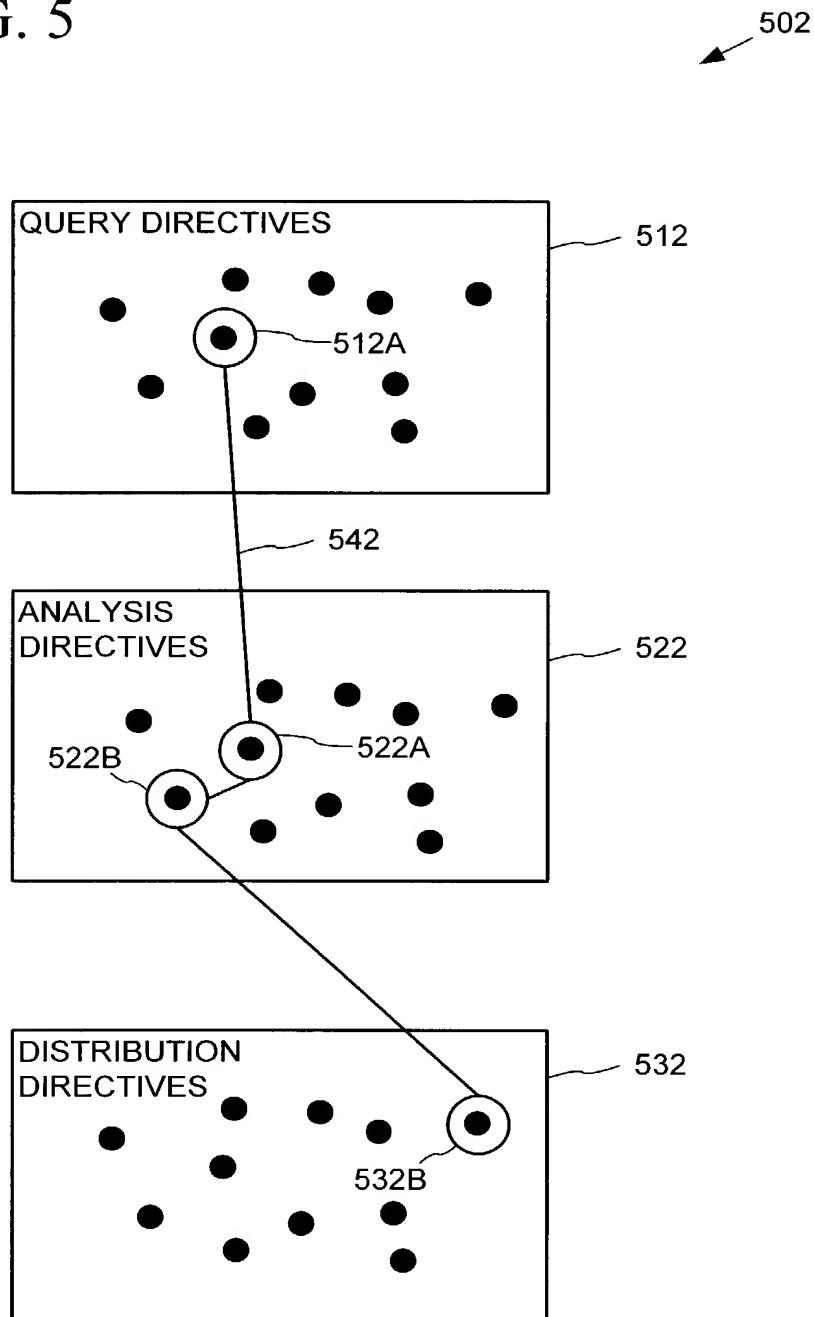


FIG. 6

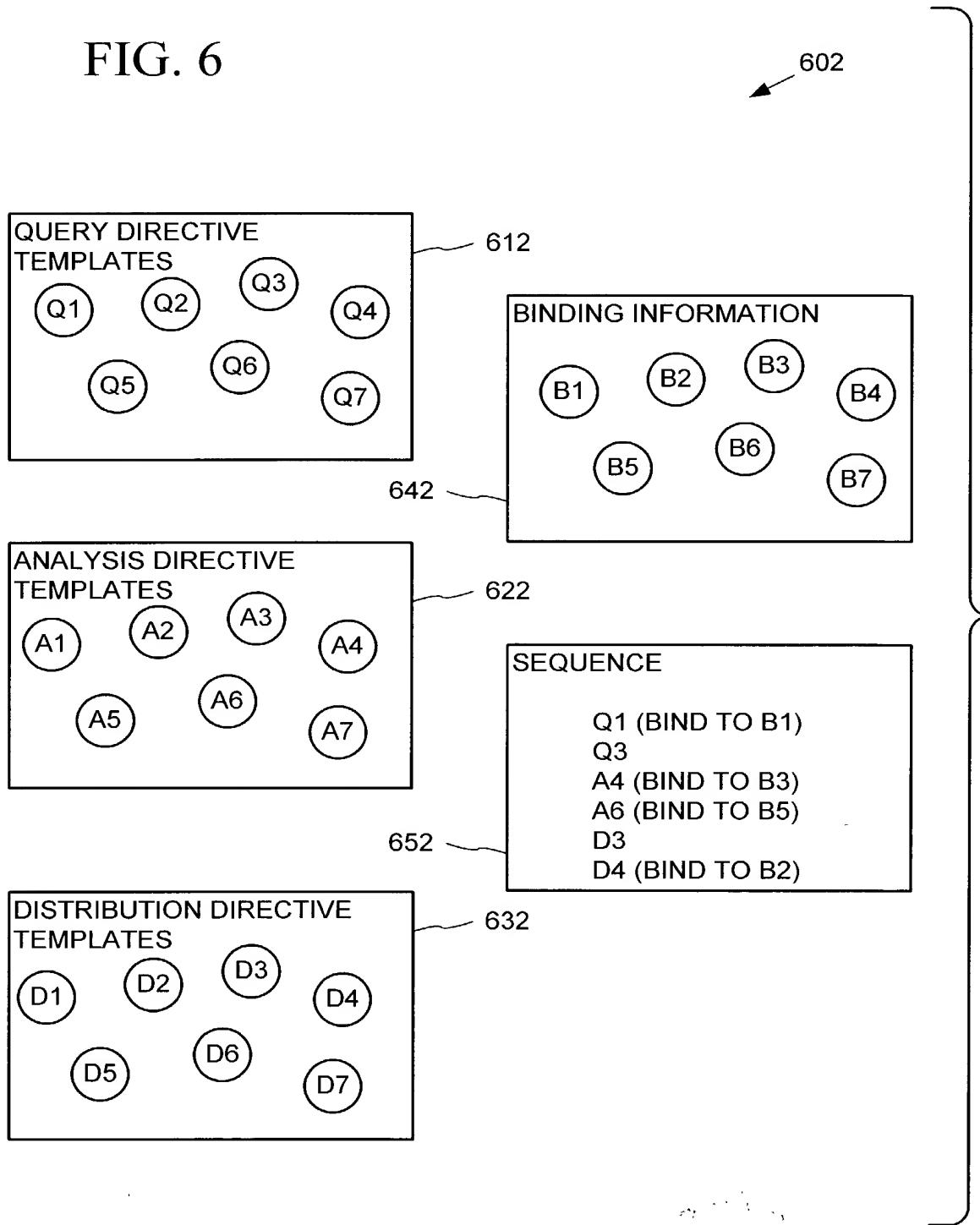


FIG. 7

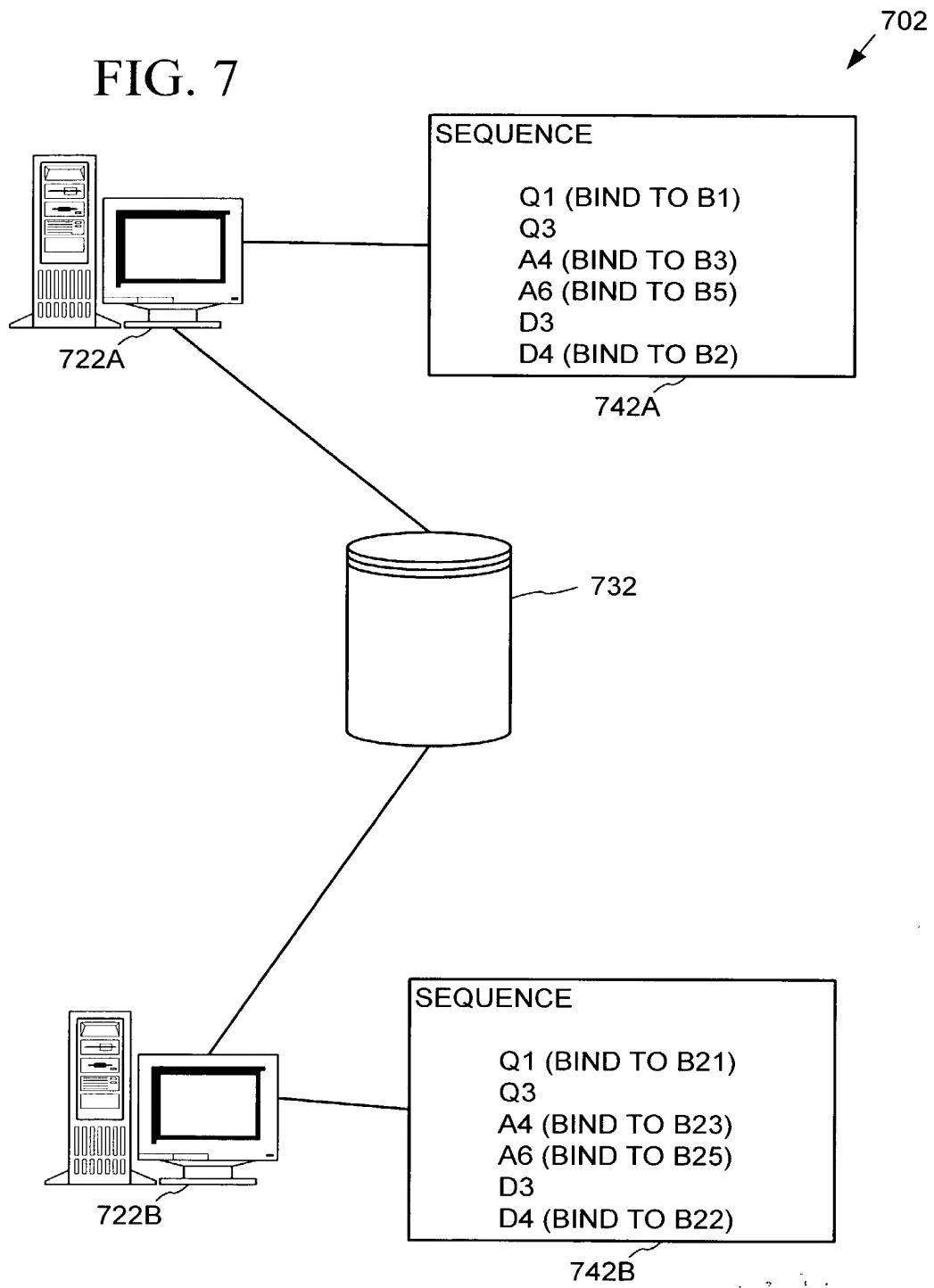


FIG. 8

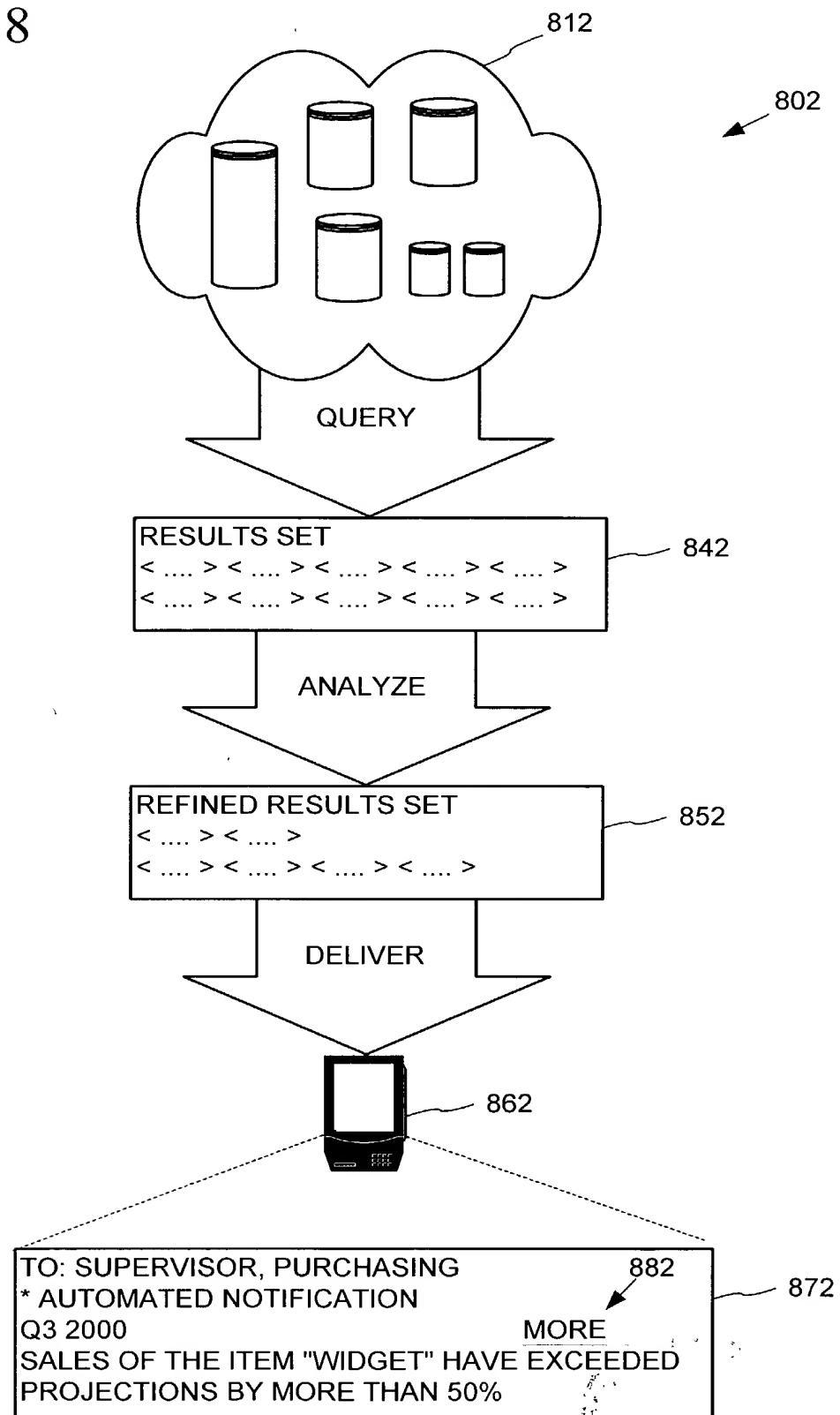


FIG. 9

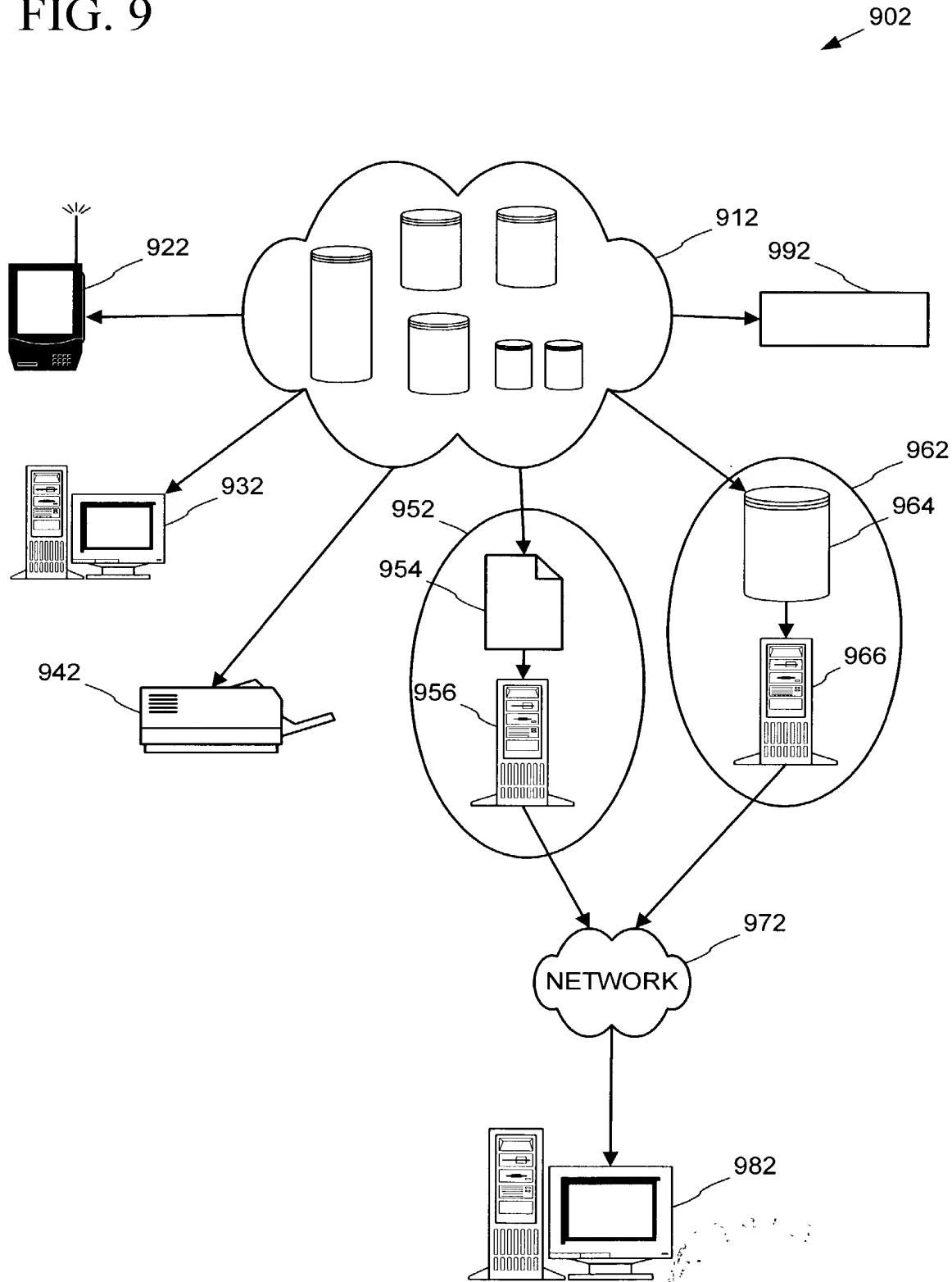


FIG. 10

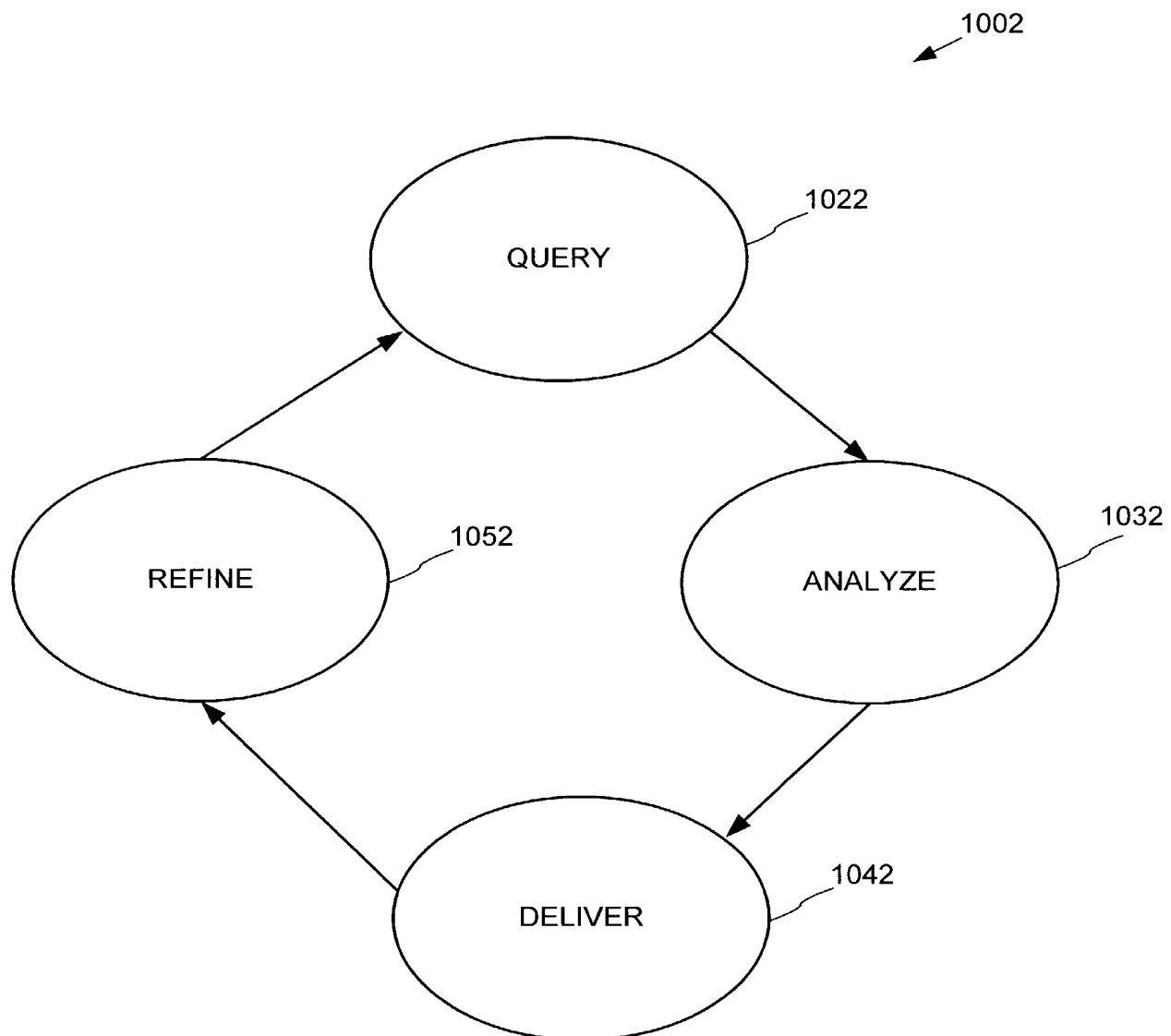


FIG. 11

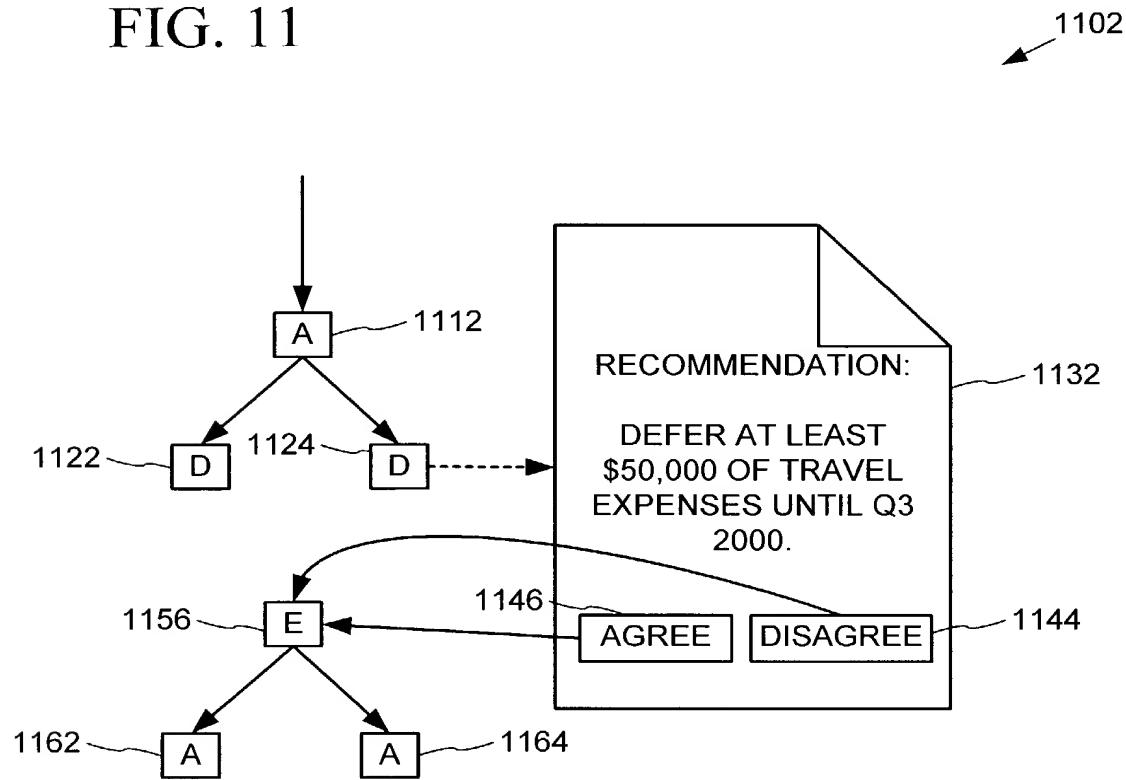


FIG. 12A

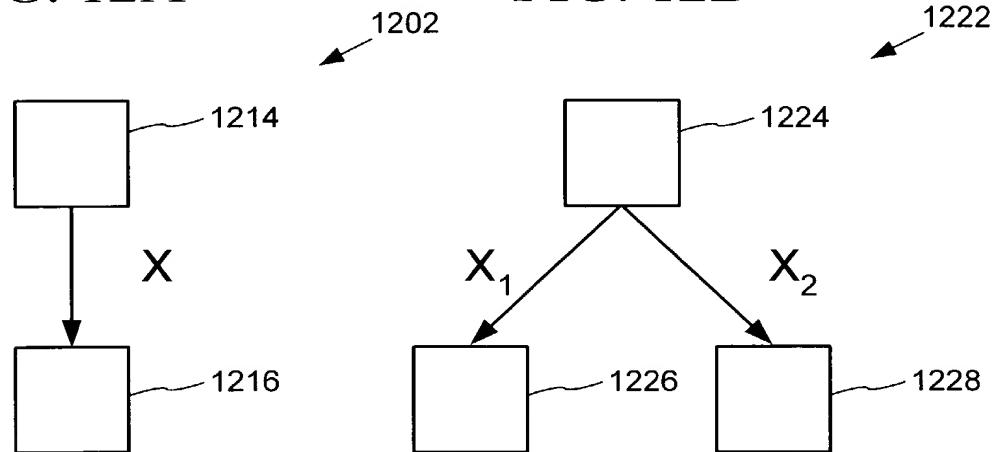


FIG. 12B

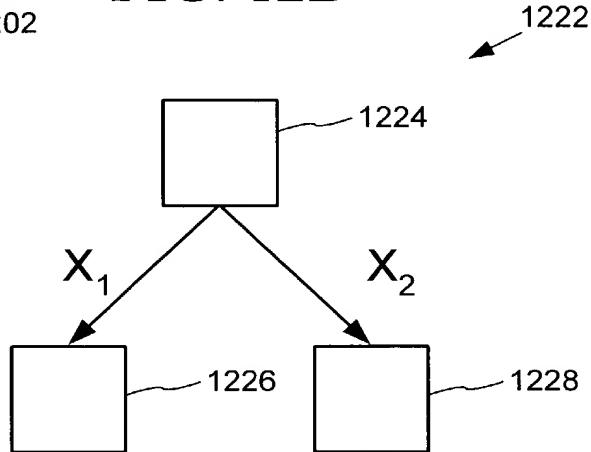


FIG. 12C

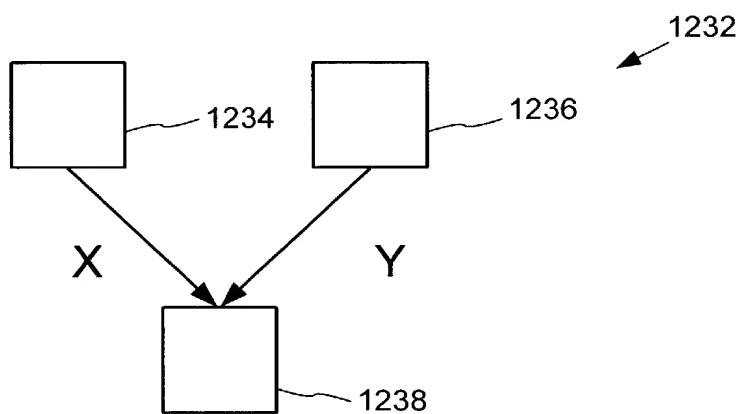


FIG. 12D

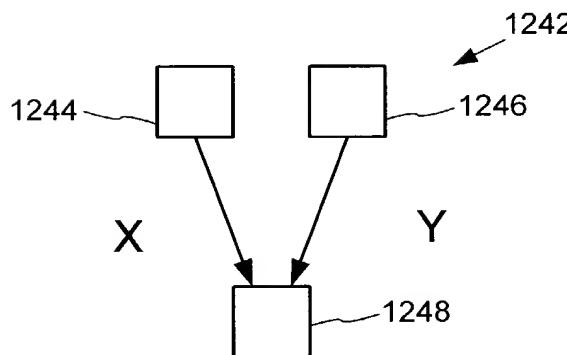


FIG. 12E

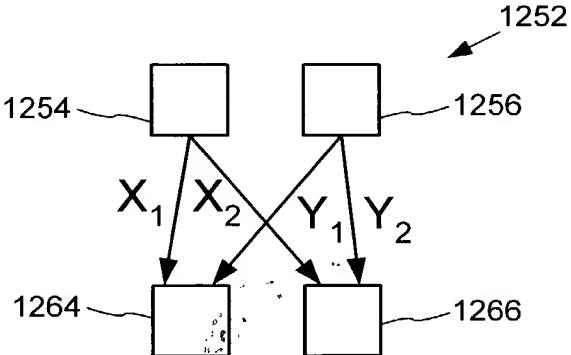


FIG. 13

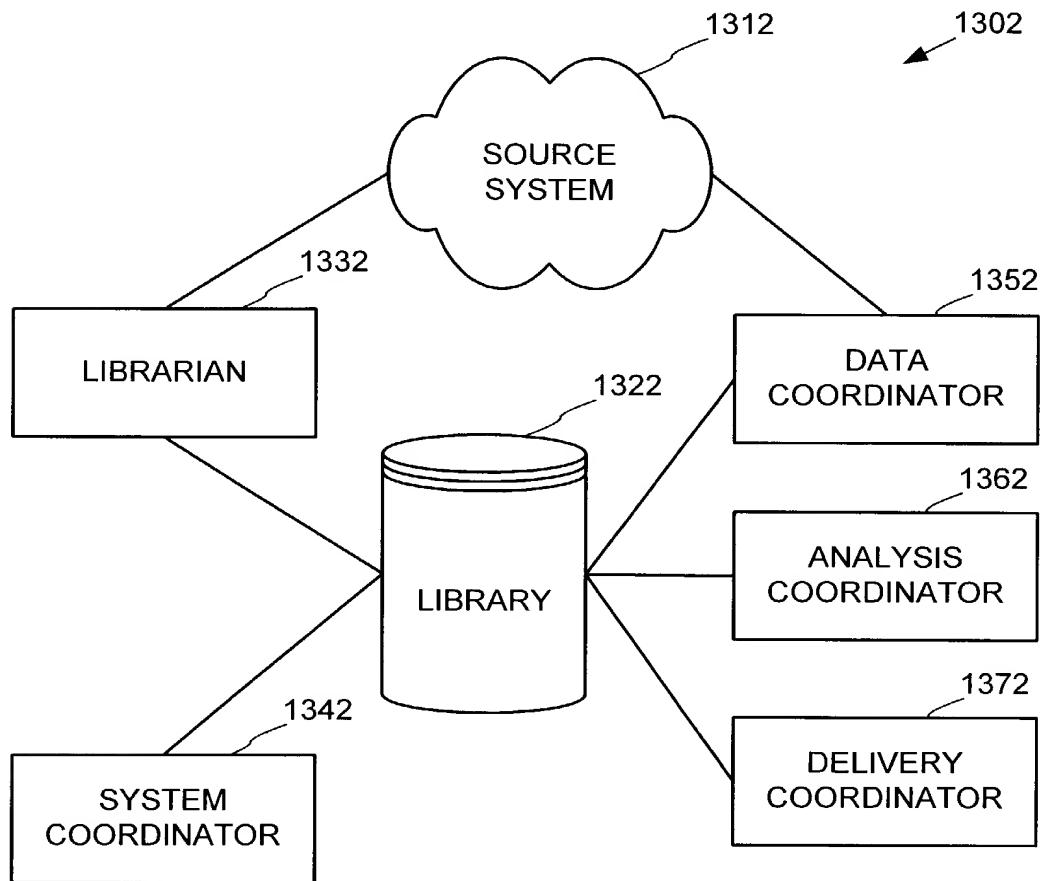


FIG. 14A

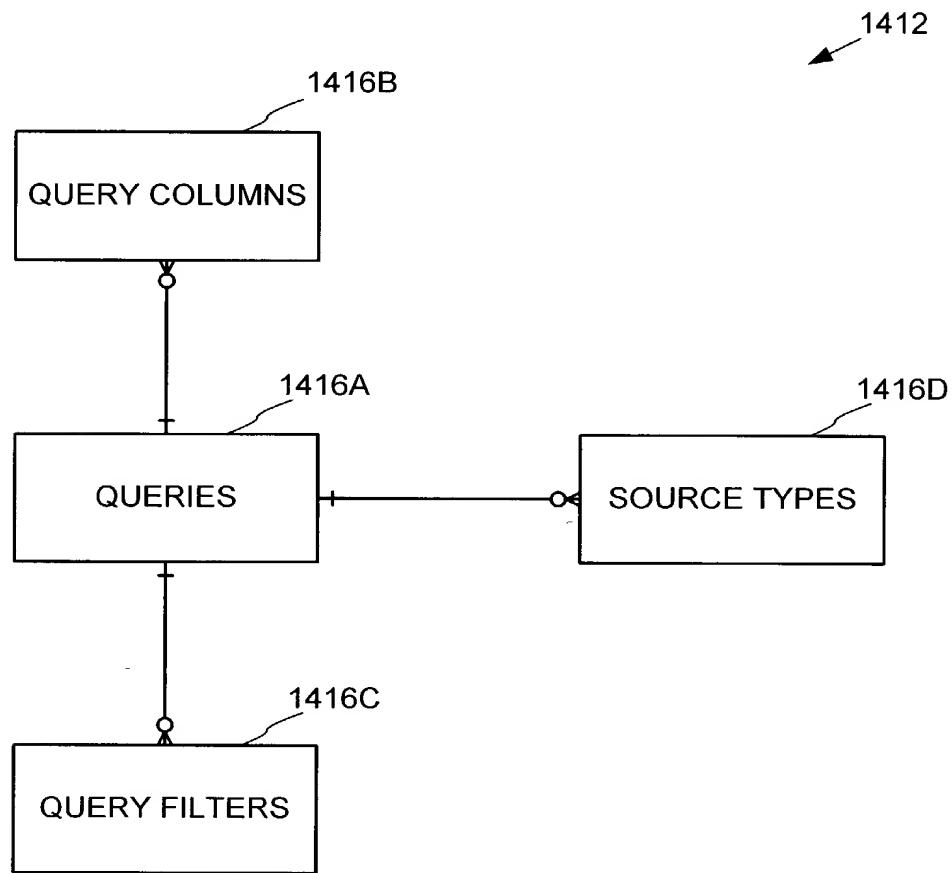


FIG. 14B

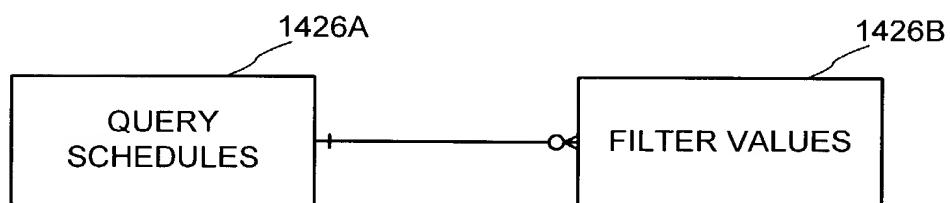


FIG. 14C

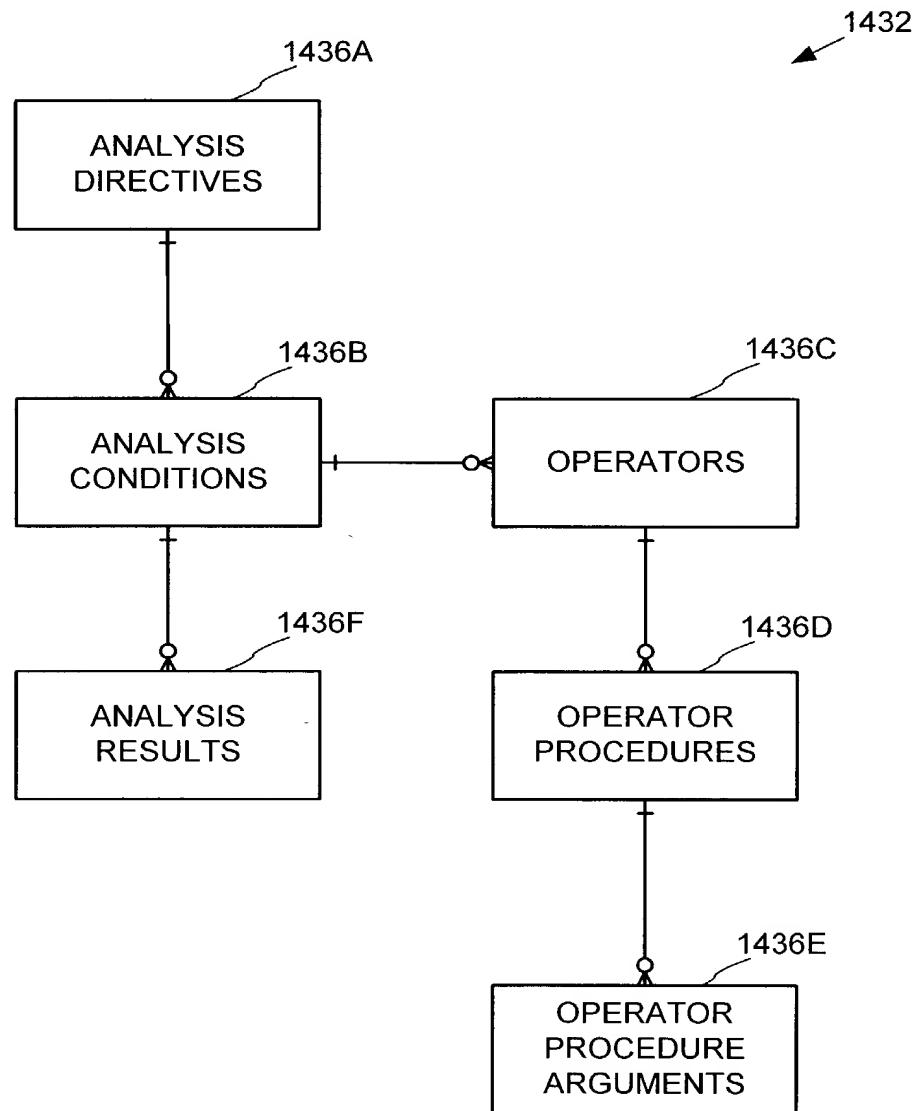


FIG. 14D

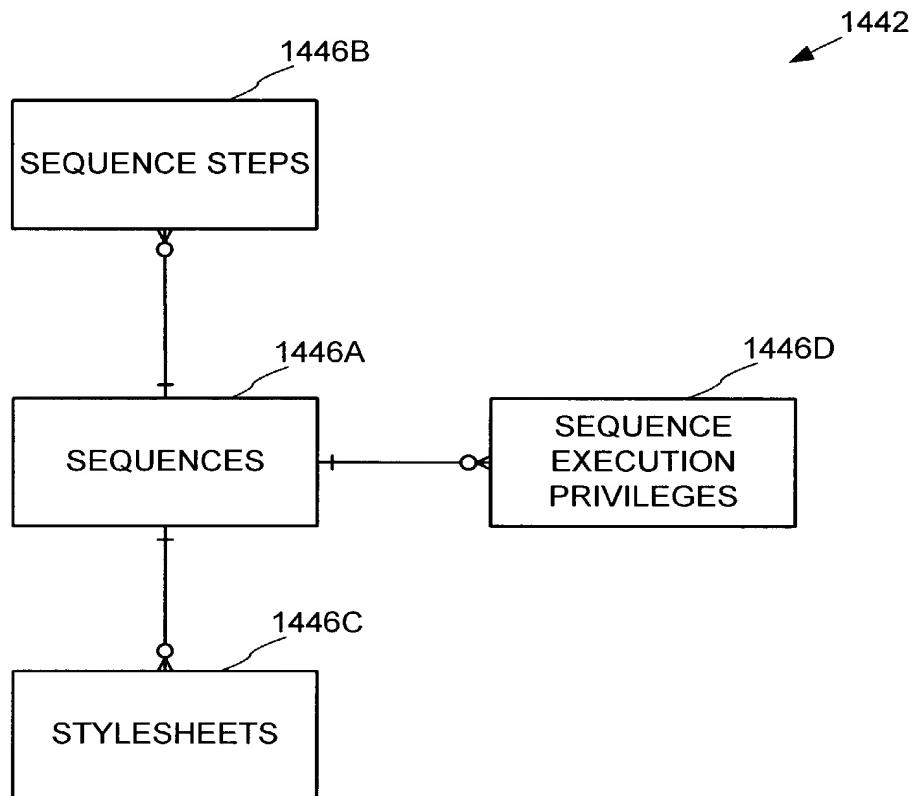


FIG. 14E

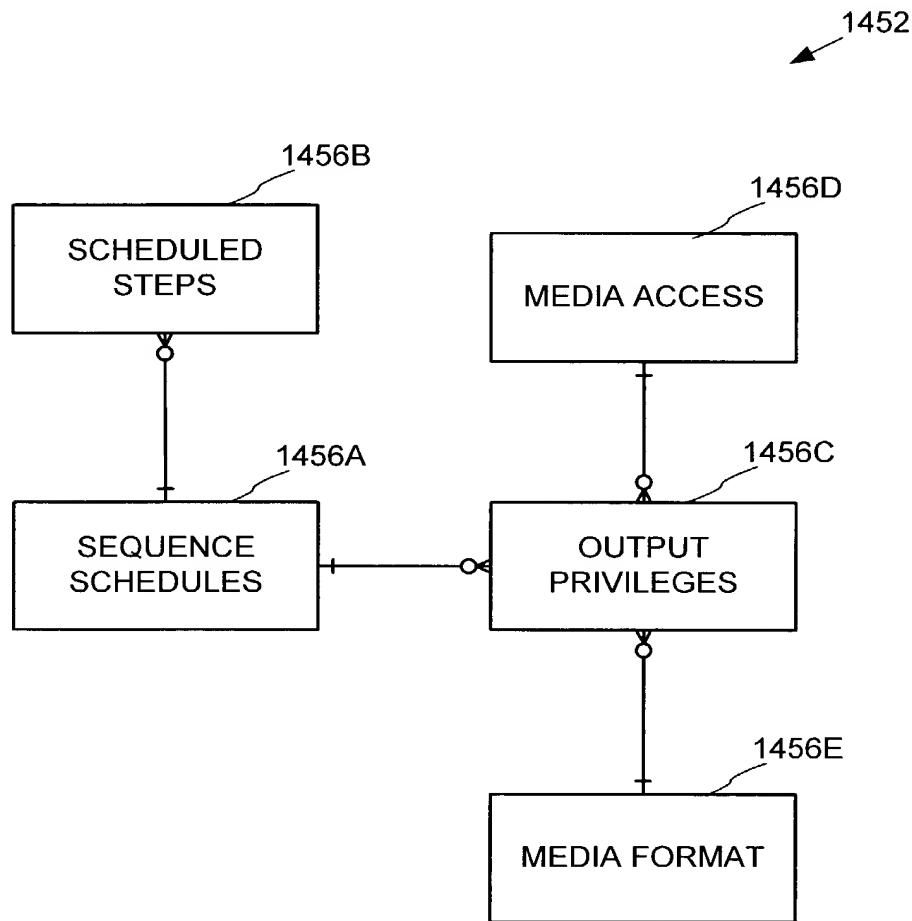


FIG. 14F

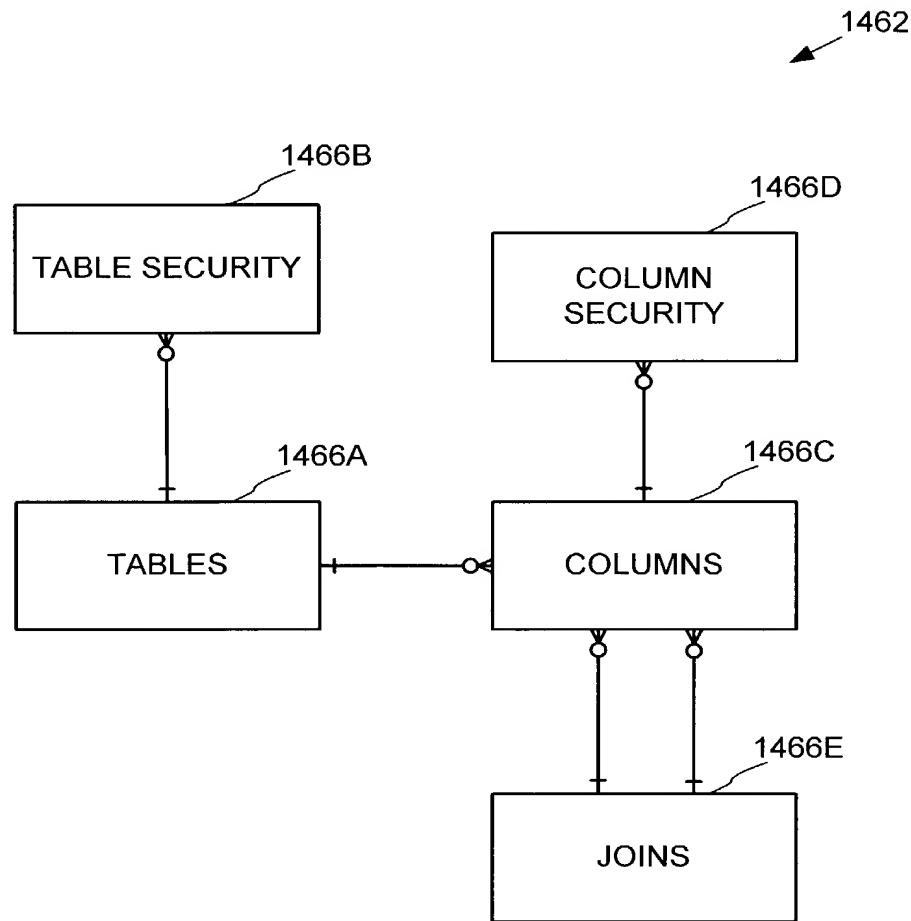


FIG. 14G

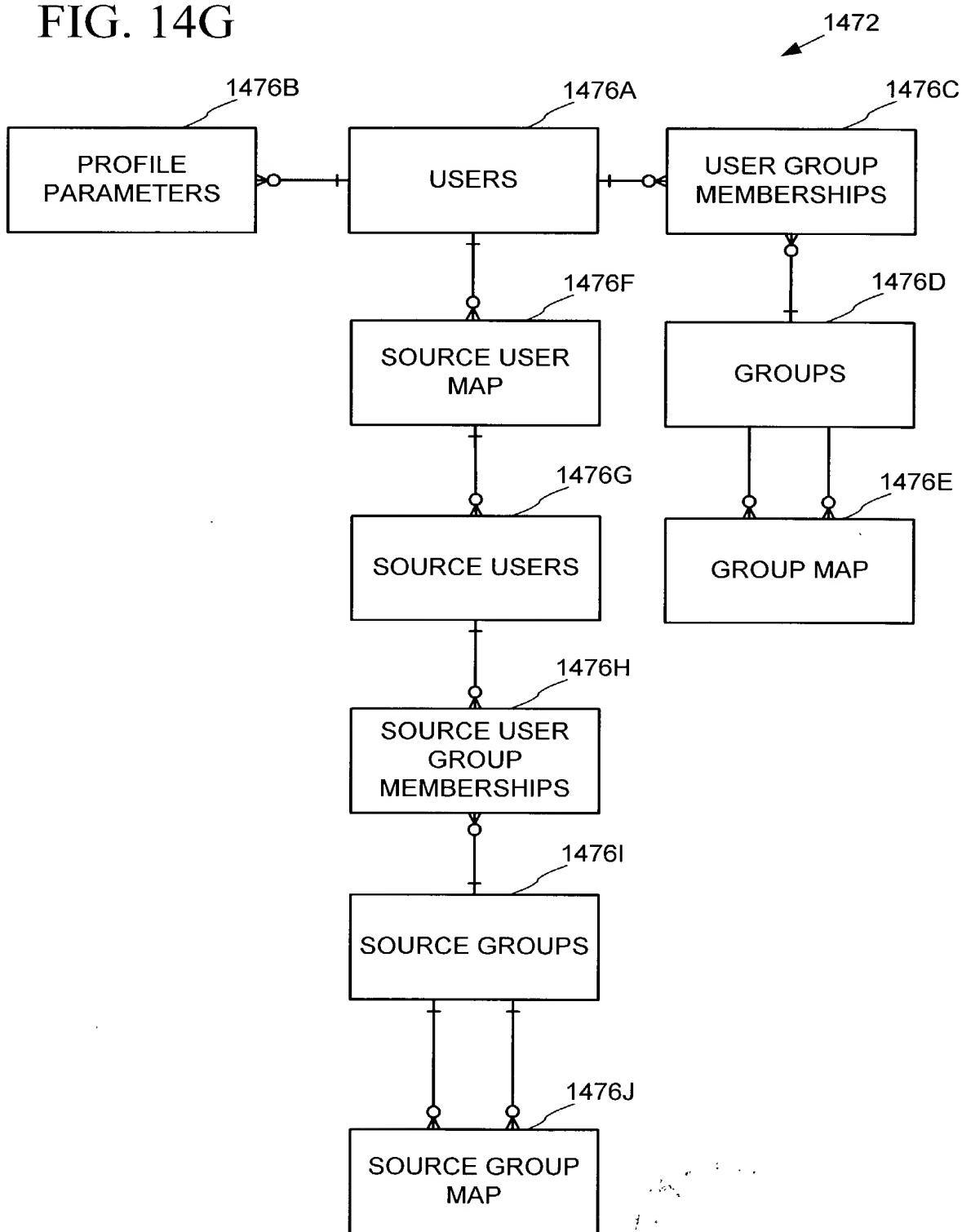


FIG. 14H

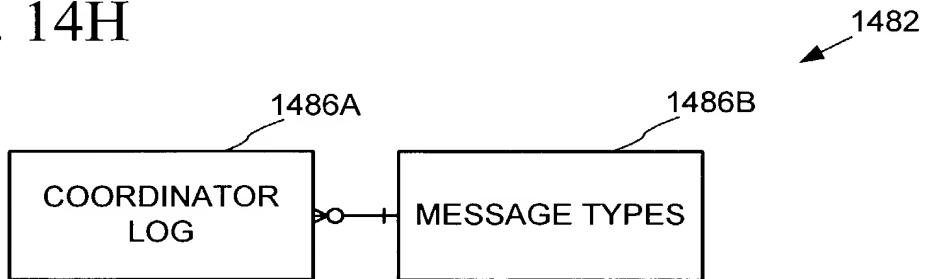


FIG. 15A

1502

QUERY DIRECTIVES					
NAME	DESC	SOURCE	USER	STATUS	OPTION
NEW	NEW	SYSTEM A	NB	AVAILABLE ▼	ADD
CC1	COST CENTER	SYSTEM A	EH	AVAILABLE ▼	MOD
AR-PTD	PERIOD TO DATE	SYSTEM B	LS	AVAILABLE ▼	MOD
REV	PTD REVENUE	SYSTEM B	LS	AVAILABLE ▼	MOD
FIN	FINANCIALS	SYSTEM B	LS	AVAILABLE ▼	MOD
SALES	SALES BY DEPT	SYSTEM B	LS	AVAILABLE ▼	MOD

FIG. 15B

1504

QUERY:NEW QUERY						
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT
SELECT COLUMN						
ACCOUNTING_DATE_D						
AR_RCT_REV_RESN_D						
AR_RECVT_STATUS_D						
AR_REVENUE_F						
AR_SCH_PMT_DTL_F						
AR_SHIP_VIA_D						
AR_SOLD_TO_CUST_D						
ASSET_BOOK_D						
ASSET_EMPLOYEE_D						
ASSET_INVENTORY_F						
ASSET_TYPE_D						
AUTHORIZER_D						

Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-58351, Page 22 of 103
 GENERATING INFORMATION FROM A DATA COLLECTOR TO SUPPORT DECISION-MAKING,
 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR
 Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon
 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR

FIG. 15C

1506

QUERY:NEW QUERY

TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT
DEPARTMENT_D	DEPARTMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	DEPARTMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	DEPARTMENT_DESC					
	DEPARTMENT_KEY					

ADD

FIG. 15D

1508

QUERY:NEW QUERY						QUERY TABLE & COLUMNS		
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT		
DEPARTMENT_D	DEPARTMENT_DESC	Y		DEPARTMENT	N	1		
						<input type="button" value="ADD COLUMN"/>	<input type="button" value="DONE"/>	

FIG. 15E

QUERY:NEW QUERY							QUERY TABLE & COLUMNS		
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT			
DEPARTMENT_D	DEPARTMENT_DESC	Y		DEPARTMENT	N	1			
INC_STMT_LINES_D	LINE_NAME	Y		LINE_NAME	N				
INCOME_STMT_A	PTD_ACTUAL	N	SUM	PTD_ACTUAL	N				
INCOME_STMT_A	PTD_BUDGET	N	SUM	PTD_BUDGET	N				
INCOME_STMT_A	PTD_VARIANCE	N	SUM	PTD_VARIANCE	N				
							ADD COLUMN	DONE	

FIG. 15F

1512

QUERY:NEW QUERY					
TABLE	COLUMN	FILTER OPERATOR	ROR?	REF TABLE	REF COLUMN
BUDGET_D	BUDGET	IN	NO		REF TABLE
		=	=	=	=
		<	<	<	<
		>	>	>	>
		IN			
					ADD

FIG. 15G

1514

QUERY:NEW QUERY					
TABLE	COLUMN	FILTER OPERATOR	ROR?	REF TABLE	REF COLUMN
BUDGET_D	BUDGET	IN	N		
PERIOD_D	PERIOD	=	N		
DEPARTMENT_D	DEPARTMENT	=	N	DEPARTMENT_D	DEPARTMENT_KEY

ADD FILTER

FINISH

FIG. 15H

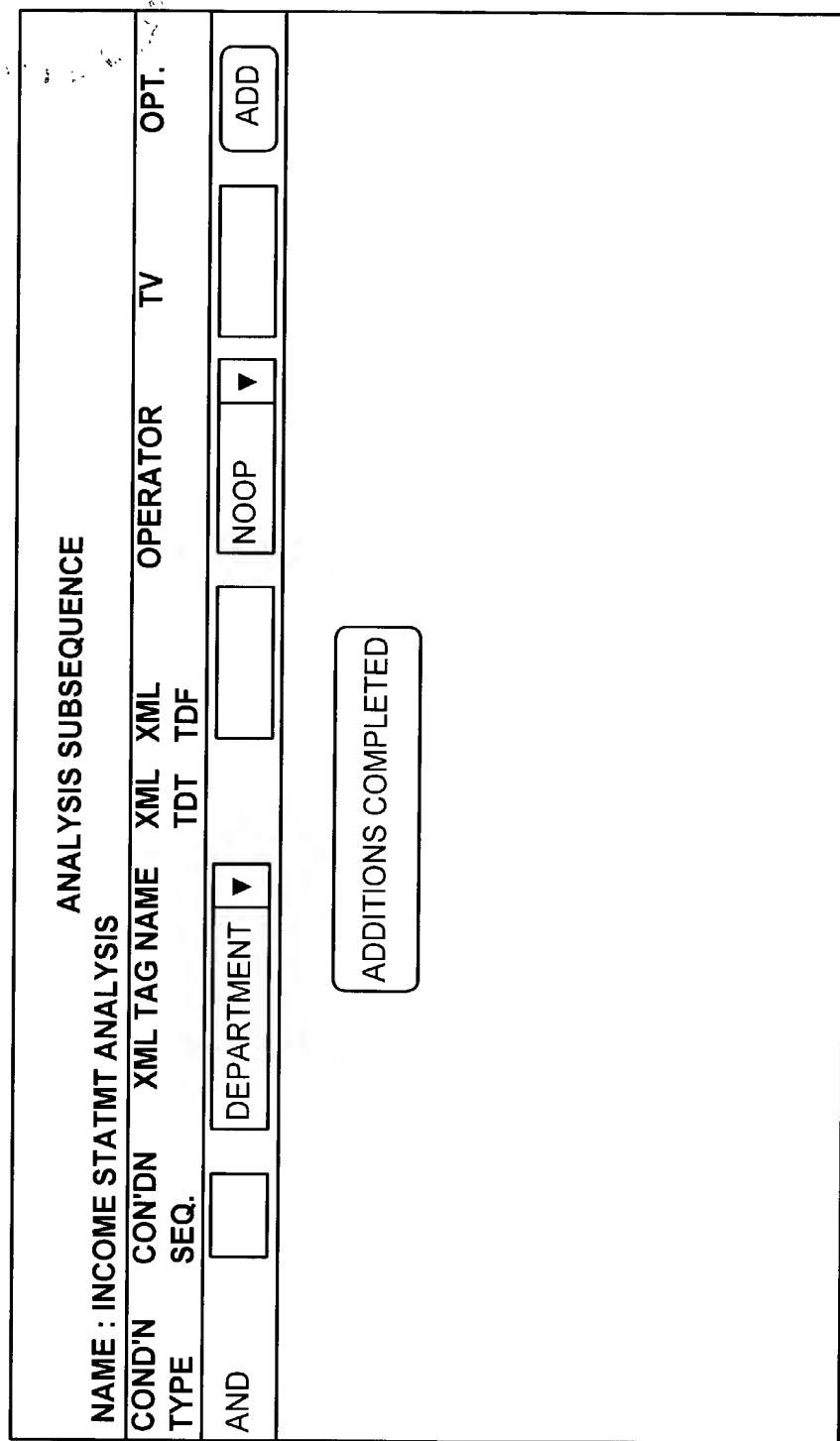
1516

ANALYSIS SUBSEQUENCE					
YOU ARE TYING THIS ANALYSIS SUBSEQUENCE TO THE QUERY DIRECTIVE: NEW QUERY					
ANALYSIS SUBS NAME	USER NAME	RESULTS TYPE	LAST RUN	DATE	OPTIONS
INCOME STMT ANALYSIS	NB	SHOW			<input type="button" value="ADD"/>

Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-58351, Page 28 of 103
GENERAL INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING,
97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR
Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon

FIG. 15I

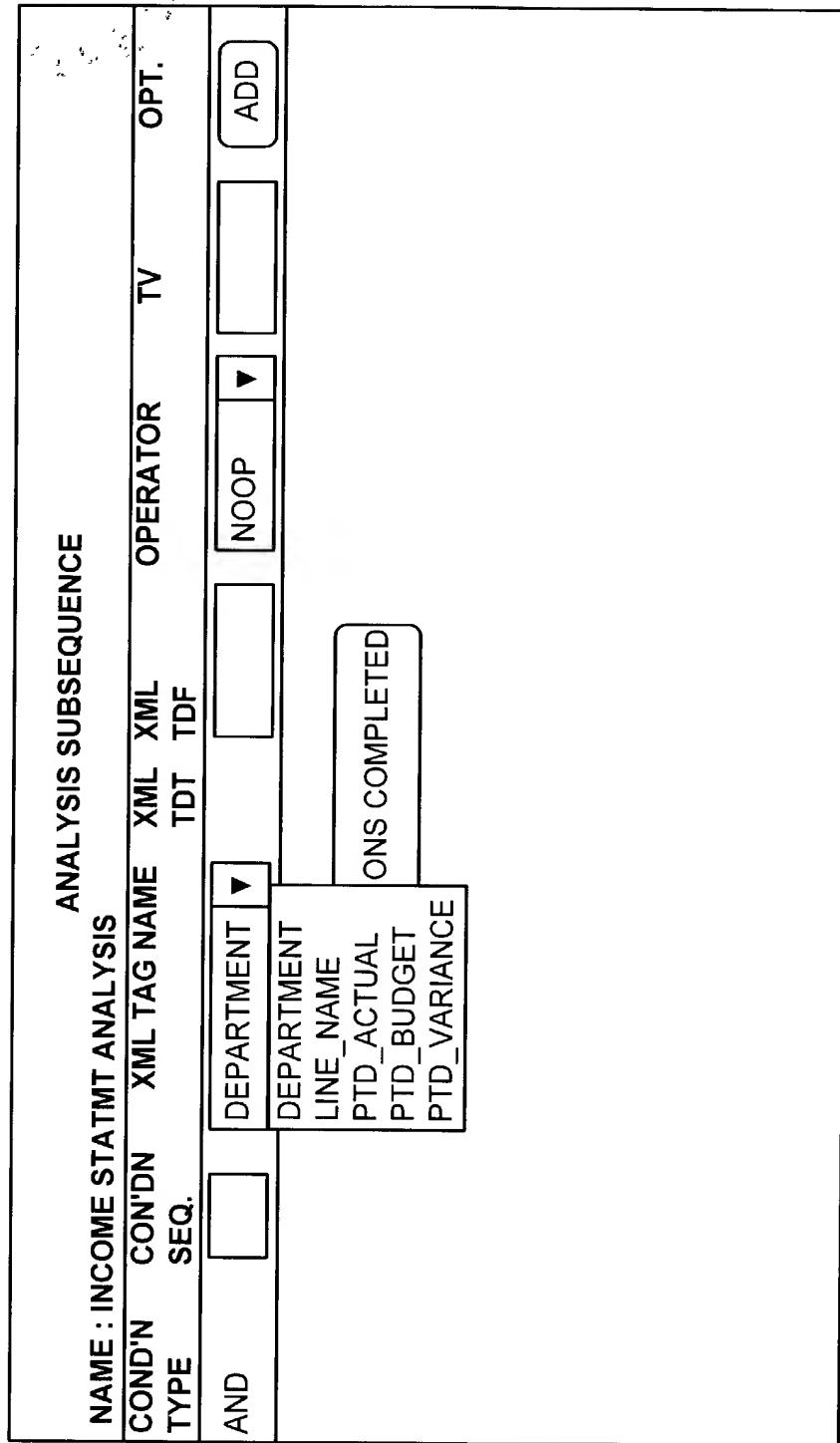
1518



Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-58351, Page 29 of 103
GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING,
97204, (S03) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR
Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon

FIG. 15J

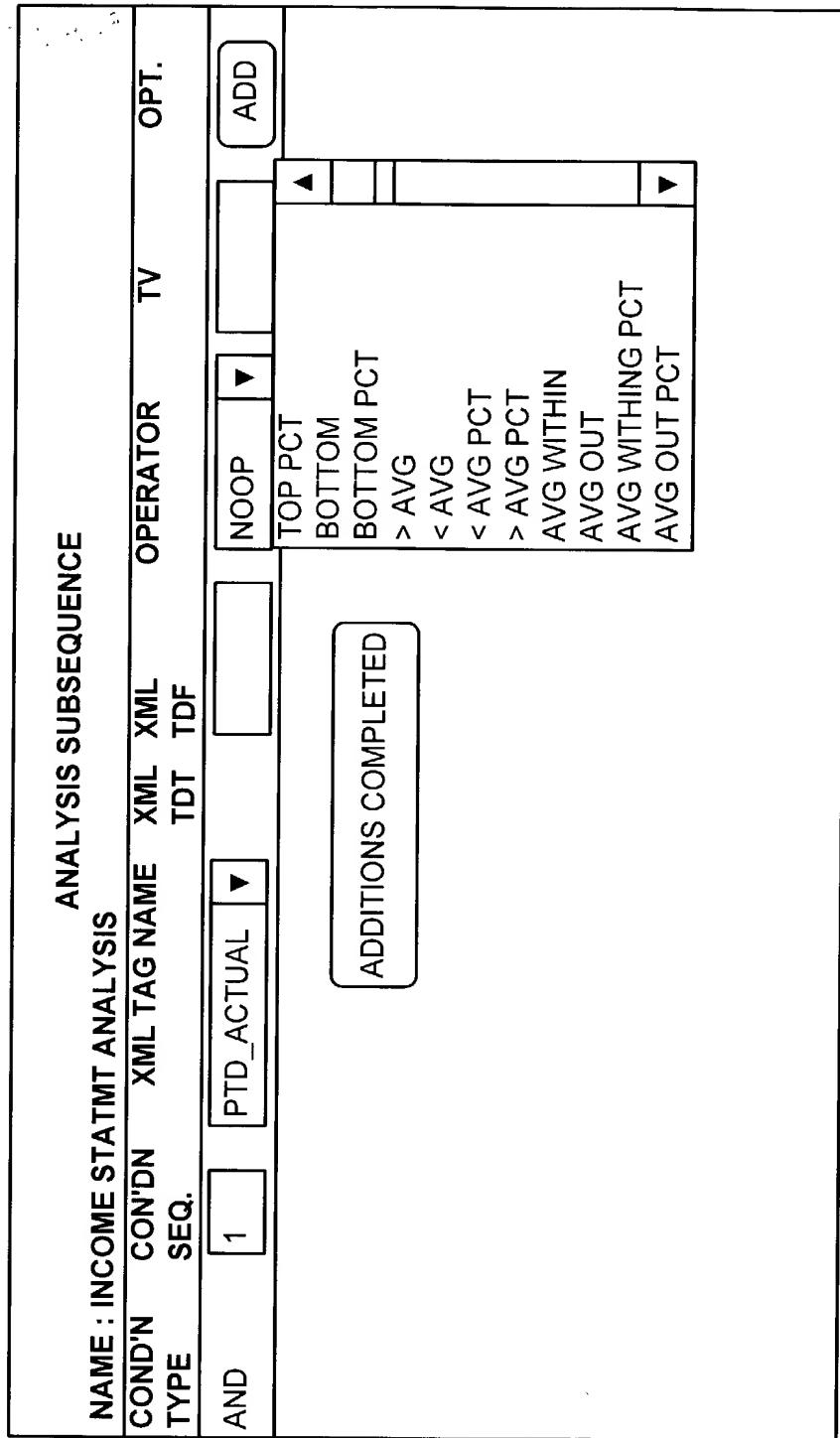
1520



Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-5831, Page 30 of 103
GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING,
97204, (503) 226-7391, Inventor: Scheuich et al., Title: SYSTEMS AND METHODS FOR
Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon

FIG. 15K

1522



Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-5831, Page 31 of 103
 GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING,
 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR
 Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon

FIG. 15L

1524

ANALYSIS SUBSEQUENCE							OPT
COND'N	COND'N	XML TAG NAME	XML	OPERATOR	TV	OPT	
TYPE	SEQ		TDT	TDF			
AND		DEPARTMENT	►	NOOP	►	ADD	
AND	1	PTD_ACTUAL	►	↔	► 0	MOD	DEL
AND	2	PTD_VARIANCE	►	›	► 300000	MOD	DEL
AND	3	PTD_VARIANCE	►	TOP PCT	► 10	MOD	DEL
							ADDITIONS COMPLETED

FIG. 15M

1526

ADD, EDIT OR DELETE SEQUENCES		SEQUENCES		
ID	NAME	DESCRIPTION	STATUS	USER OPT
	INCOME STAT'T ANALYSIS	INCOME STAT'T ANALYSIS	AVAIL ▼	NB ADD
24	FINANCIAL STATEMENT	FINANCIAL STATEMENT	AVAIL ▼	LS MOD
25	FSV	FSV	AVAIL ▼	NB MOD
26	COST CENTER SCORING 1	COST CENTER SCORING	DISAB ▼	LS MOD
27	COST CENTER SCORING 2	CSS PTD-VARIANCE	AVAIL ▼	LS MOD

FIG. 15N

1530

ADD OR EDIT SEQUENCE STEP INFORMATION																										
SEQUENCE NAME: INCOME STATEMENT ANALYSIS																										
ID	STEP DIRECTIVE TYPE	DIRECTIVE ID	LUB	LUD																						
28	1	QUERY DIRECTIVE	QUERY FOR STEP ▼		<input type="button" value="ADD"/> <input type="button" value="DEFINE"/>																					
<table border="1"><tr><td>AR - PTD REVENUE BY DEPARTMENT</td><td>◀</td><td>▶</td></tr><tr><td>VARIANCE AND VARIANCE PERCENT</td><td>◀</td><td>▶</td></tr><tr><td>NEW QUERY</td><td>◀</td><td>▶</td></tr><tr><td>NEIL'S QUERY</td><td>◀</td><td>▶</td></tr><tr><td>NEIL'S OTHER QUERY</td><td>◀</td><td>▶</td></tr><tr><td>LARRY'S QUERY</td><td>◀</td><td>▶</td></tr><tr><td>YET ANOTHER LARRY QUERY</td><td>◀</td><td>▶</td></tr></table>						AR - PTD REVENUE BY DEPARTMENT	◀	▶	VARIANCE AND VARIANCE PERCENT	◀	▶	NEW QUERY	◀	▶	NEIL'S QUERY	◀	▶	NEIL'S OTHER QUERY	◀	▶	LARRY'S QUERY	◀	▶	YET ANOTHER LARRY QUERY	◀	▶
AR - PTD REVENUE BY DEPARTMENT	◀	▶																								
VARIANCE AND VARIANCE PERCENT	◀	▶																								
NEW QUERY	◀	▶																								
NEIL'S QUERY	◀	▶																								
NEIL'S OTHER QUERY	◀	▶																								
LARRY'S QUERY	◀	▶																								
YET ANOTHER LARRY QUERY	◀	▶																								

FIG. 150

1532

ADD OR EDIT SEQUENCE STEP INFORMATION					
SEQUENCE NAME: INCOME STATEMENT ANALYSIS					
ID	STEP DIRECTIVE TYPE	DIRECTIVE ID	LUB	LUD	
28	1	QUERY DIRECTIVE	NEW QUERY ▶	12/15/00	MOD
					DEFINE
28	2	ANALYSIS DIRECTIVE ▶	DIRECTIVE		
		QUERY DIRECTIVE			
		ANALYSIS DIRECTIVE			
		EVENT DIRECTIVE			
		DISTRIBUTION DIRECTIVE			

FIG. 15P

1534

ADD OR EDIT SEQUENCE STEP INFORMATION						
SEQUENCE NAME: INCOME STATEMENT ANALYSIS						
ID	ST	DIRECTIVE TYPE	DIRECTIVE ID	LUB	LUD	
28	1	QUERY DIR	NEW QUERY	▼	12/15/00	MOD
						DEFINE
28	2	ANALYSIS DIR	INCOME STMT ANALYSIS	▼	NB	12/15/00
						MOD
						DEFINE
28	3	DISTRIBUTION DIRECTIVE	▼	DIRECTIVE		

Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scherlrich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-58351, Page 36 of 103

FIG. 15Q

1536

SEQUENCE NAME: INCOME STATEMENT ANALYSIS	
FORMAT	CREATE
HTML	<input checked="" type="checkbox"/>
EXCEL	<input type="checkbox"/>
HTML	<input type="checkbox"/>
WAP	<input type="checkbox"/>

FIG. 15R

1538

HOME INSTRUCTIONS		SCHEDULE SEQUENCES				
SEQUENCES AVAILABLE		SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY
ADMIN	INCOME STAT'T ANALYSIS	LS	ISA FOR DEC '00	IMMEDIATE	▼	ADD
SYS SETTINGS	SELECT SEQUENCE TO VIEW					
USERS						
LOGS						
APPL SETTINGS	COST CENTER SCORING - PTD VARIANCE	▼				
MEDIA SETT'S						

Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTOR TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Document No.: 6115-58351, Page 38 of 103

FIG. 15S

1540

SCHEDULE SEQUENCES			
SEQUENCE NAME	USER	SCHEDULE DESC	FREQ
INCOME STAT'T ANALYSIS	LS	ISA FOR DEC '00	IMMEDIATE ▶
SELECT SEQUENCE TO VIEW			IMMEDIATE ONCE
COST CENTER SCORING - PTD VARIANCE			EXTRACT DAILY WEEKLY MONTHLY
			ADD

Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scherlrich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No.: 6115-58351, Page 39 of 103

FIG. 15T

1542

ADD SEQUENCE TO SCHEDULE	
SELECT THE DAYS YOU WISH THE SEQUENCE TO RUN	
<input type="checkbox"/> SUNDAY <input type="checkbox"/> MONDAY <input type="checkbox"/> TUESDAY <input type="checkbox"/> WED <input type="checkbox"/> THURS <input type="checkbox"/> FRIDAY <input type="checkbox"/> SATURDAY	
START AT	
<input type="button" value="8"/> <input type="button" value="▼"/> : <input type="button" value="30"/> <input type="button" value="▼"/> <input type="button" value="PM"/> <input type="button" value="▼"/>	
NEXT START DATE	
<input type="button" value="2000"/> <input type="button" value="▼"/> <input type="button" value="DEC"/> <input type="button" value="▼"/> <input type="button" value="15"/> <input type="button" value="▼"/>	
<input type="button" value="SUBMIT"/>	

FIG. 15U

1544

SCHEDULE ENTRY			
SELECT SOURCE INFORMATION			
SEQUENCE: INCOME STATEMENT ANALYSIS			
STEP: 1			
QUERY: NEW QUERY			
SOURCE NAME	DV	▼	
	DV		PART
CONTINUE			

Application No. 09/925,125, Filed: August 9, 2001, Attorney's Docket No.: 6115-58351, Page 41 of 103
GENERALIZING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING,
97204, (503) 226-7391, Inventor: Scherlrich et al., Title: SYSTEMS AND METHODS FOR
Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon

FIG. 15V

1546

SCHEDULE ENTRY						
SELECT SOURCE INFORMATION						
SEQUENCE: INCOME STATEMENT ANALYSIS						
STEP: 1						
QUERY: NEW QUERY						
SOURCE NAME	PART					
SOURCE SET	OAS	▼				
						CONTINUE

FIG. 15W

1548

FILTER VALUES FOR QUERY			
SEQUENCE: INCOME STATEMENT ANALYSIS			
SCHEDULE: INCOME STATEMENT ANALYSIS FOR DECEMBER 2000			
SEQUENCE STEP: 1			
NEW QUERY			
TABLE NAME	COL NAME	OP	FILTER VALUE
BUDGET_D	BUDGET	IN	<input type="button" value="ACTUAL"/> <input type="button" value="▼"/> <input type="button" value="MOD"/> <input type="button" value="DEL"/>
			<input type="button" value="CORPORATE 1997"/> <input type="button" value="▼"/> <input type="button" value="MOD"/>
			<input type="button" value=""/> <input type="button" value="▼"/> <input type="button" value="ADD"/>
PERIOD_D	PERIOD	=	<input type="button" value="DEC-2000"/> <input type="button" value="▼"/> <input type="button" value="MOD"/>
IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED			
<input type="button" value="FINISHED"/>			

FIG. 15X

1550

SEQUENCE OUTPUT PRIVILEGES						
SEQCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000						
USER	ACCESS	FORMAT	ST	CS	RESULT TAG	RESULT VALUE
NEILB	EMAIL_DATA	HTML	▼	▶	▼	▶
NEILB	LARRYS					
	ERICH					
	MARC					
	SALES					
	MARKET					
	HQ					

FINISHED

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FIG. 15Y

1552

SEQUENCE OUTPUT PRIVILEGES							
SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000							
USER	ACCESS	FORMAT	ST	CS	RESULT TAG	RESULT VALUE	OPT
NEILB	EMAIL_DATA	HTML	▼	▶	▶	▶	ADD
	EMAIL_DATA						
	EMAIL_URL						
	WEB						
	DESK_ALERT						

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FINISHED

FIG. 15Z

1554

SEQUENCE OUTPUT PRIVILEGES						
SEQSCHEDE: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000						
USER	ACCESS	FORMAT	ST	CSS RESULT TAG	RESULT VALUE	OPT
NEILB ▼	EMAIL_DATA ▼	HTML ▼	▼	3		<input type="button" value="ADD"/>
		HTML	▼			
		WAP				
		XML				
		EXCEL				
		PALM VII				
		PALM MAIL				
			1			
			2			

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FIG. 15AA

1556

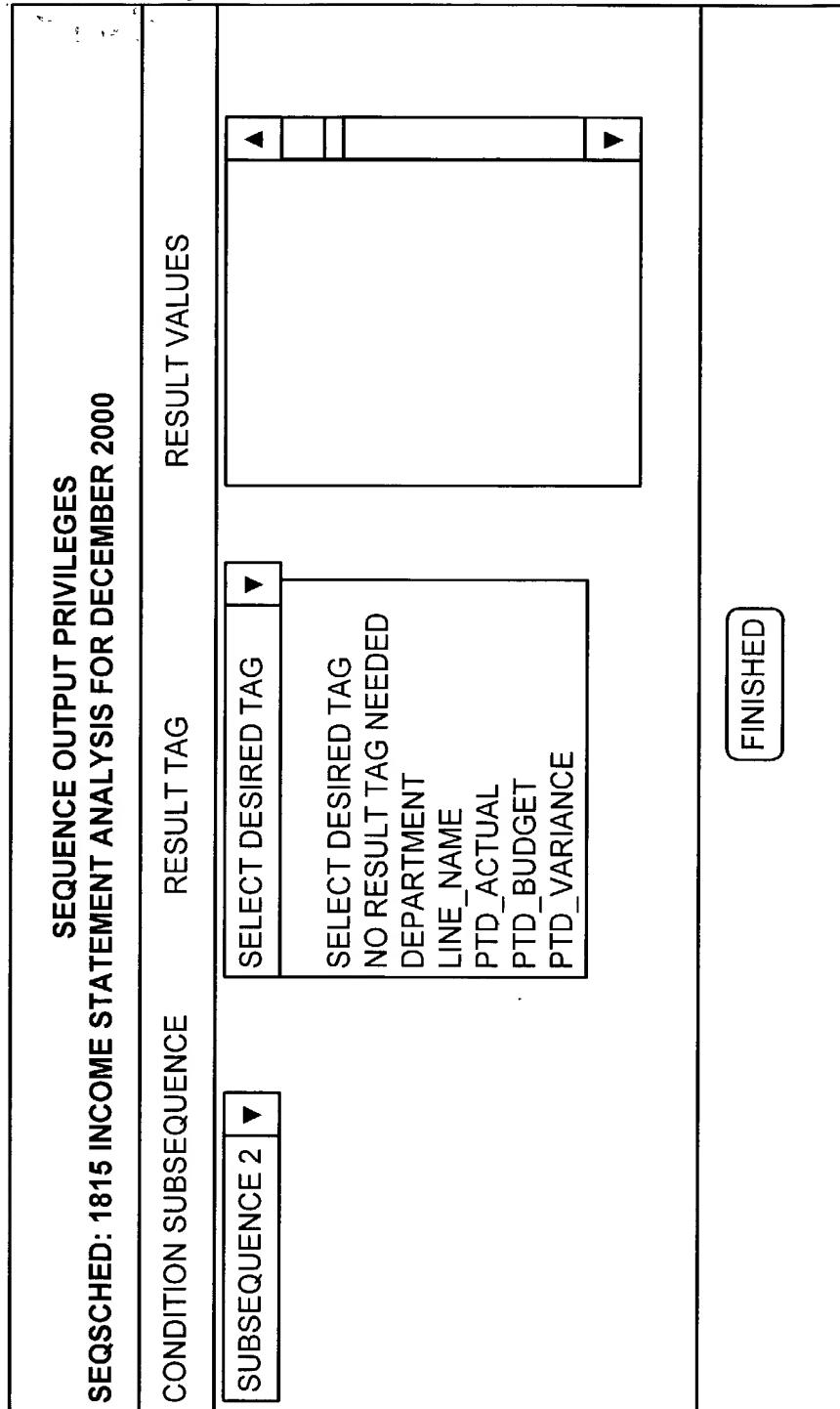


FIG. 15BB

1558

SEQUENCE OUTPUT PRIVILEGES												
SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000												
	SELECT											
<table border="1"><tr><td><input type="checkbox"/> MAINTENANCE</VAL></td></tr><tr><td><input type="checkbox"/> MANUFACTURING</VAL></td></tr><tr><td><input type="checkbox"/> MANUFACTURING PLANT 1</VAL></td></tr><tr><td><input type="checkbox"/> MANUFACTURING PLANT 2</VAL></td></tr><tr><td><input type="checkbox"/> MARKETING</VAL></td></tr><tr><td><input checked="" type="checkbox"/> NON-PRODUCT SALES</VAL></td></tr><tr><td><input type="checkbox"/> ORDER ENTRY</VAL></td></tr><tr><td><input type="checkbox"/> PARENT TOTAL</VAL></td></tr><tr><td><input type="checkbox"/> PAYROLL</VAL></td></tr><tr><td><input checked="" type="checkbox"/> PRODUCT SALES</VAL></td></tr><tr><td><input type="checkbox"/> </SPLIT VALUES></td></tr></table>		<input type="checkbox"/> MAINTENANCE</VAL>	<input type="checkbox"/> MANUFACTURING</VAL>	<input type="checkbox"/> MANUFACTURING PLANT 1</VAL>	<input type="checkbox"/> MANUFACTURING PLANT 2</VAL>	<input type="checkbox"/> MARKETING</VAL>	<input checked="" type="checkbox"/> NON-PRODUCT SALES</VAL>	<input type="checkbox"/> ORDER ENTRY</VAL>	<input type="checkbox"/> PARENT TOTAL</VAL>	<input type="checkbox"/> PAYROLL</VAL>	<input checked="" type="checkbox"/> PRODUCT SALES</VAL>	<input type="checkbox"/> </SPLIT VALUES>
<input type="checkbox"/> MAINTENANCE</VAL>												
<input type="checkbox"/> MANUFACTURING</VAL>												
<input type="checkbox"/> MANUFACTURING PLANT 1</VAL>												
<input type="checkbox"/> MANUFACTURING PLANT 2</VAL>												
<input type="checkbox"/> MARKETING</VAL>												
<input checked="" type="checkbox"/> NON-PRODUCT SALES</VAL>												
<input type="checkbox"/> ORDER ENTRY</VAL>												
<input type="checkbox"/> PARENT TOTAL</VAL>												
<input type="checkbox"/> PAYROLL</VAL>												
<input checked="" type="checkbox"/> PRODUCT SALES</VAL>												
<input type="checkbox"/> </SPLIT VALUES>												
<p style="text-align: right;">FINISHED</p>												

FIG. 15CC

1560

SEQUENCE OUTPUT PRIVILEGES		
CONDITION SUBSEQUENCE	RESULT TAG	RESULT VALUES
SUBSEQUENCE 2 ▶	DEPARTMENT ▶	<pre><?XML VERSION = "1.0"?> <SPLIT VALUES> <VAL>COMMERCIAL SALES</VAL> <VAL? COMMUNICATIONS RESOURCES</VAL> <VAL>EAST REGION SALES</VAL> <VAL>FINANCES</VAL> <VAL>GOVERNMENT SALES</VAL> <VAL>NON-PRODUCT SALES</VAL> <VAL>PRODUCT SALES</VAL> </SPLIT VALUES></pre>
		FINISHED

FIG. 15DD

Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scherlach et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No. 6115-58351, Page 50 of 103

FIG. 15EE

1564

SCHEDULE SEQUENCES					
SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY	
TEST SEQUENCE FOR PRIV ▶	LS		IMMEDIATE ▶	ADD	
SELECT SEQUENCE TO VIEW					
TEST SEQUENCE FOR PRIVS AND STEPS ▶			VIEW		
TEST SEQUENCE FOR PRIVS AND STEPS					
COST CENTER SCORING - PTD COST CENTER SCORING - PTD VARIANCE TEST VOAGE AR - PTD REVENUE BY DEPARTMENT SOCCER SCORES BUDGET VARIANCE SCORING INCOME STATEMENT ANALYSIS					

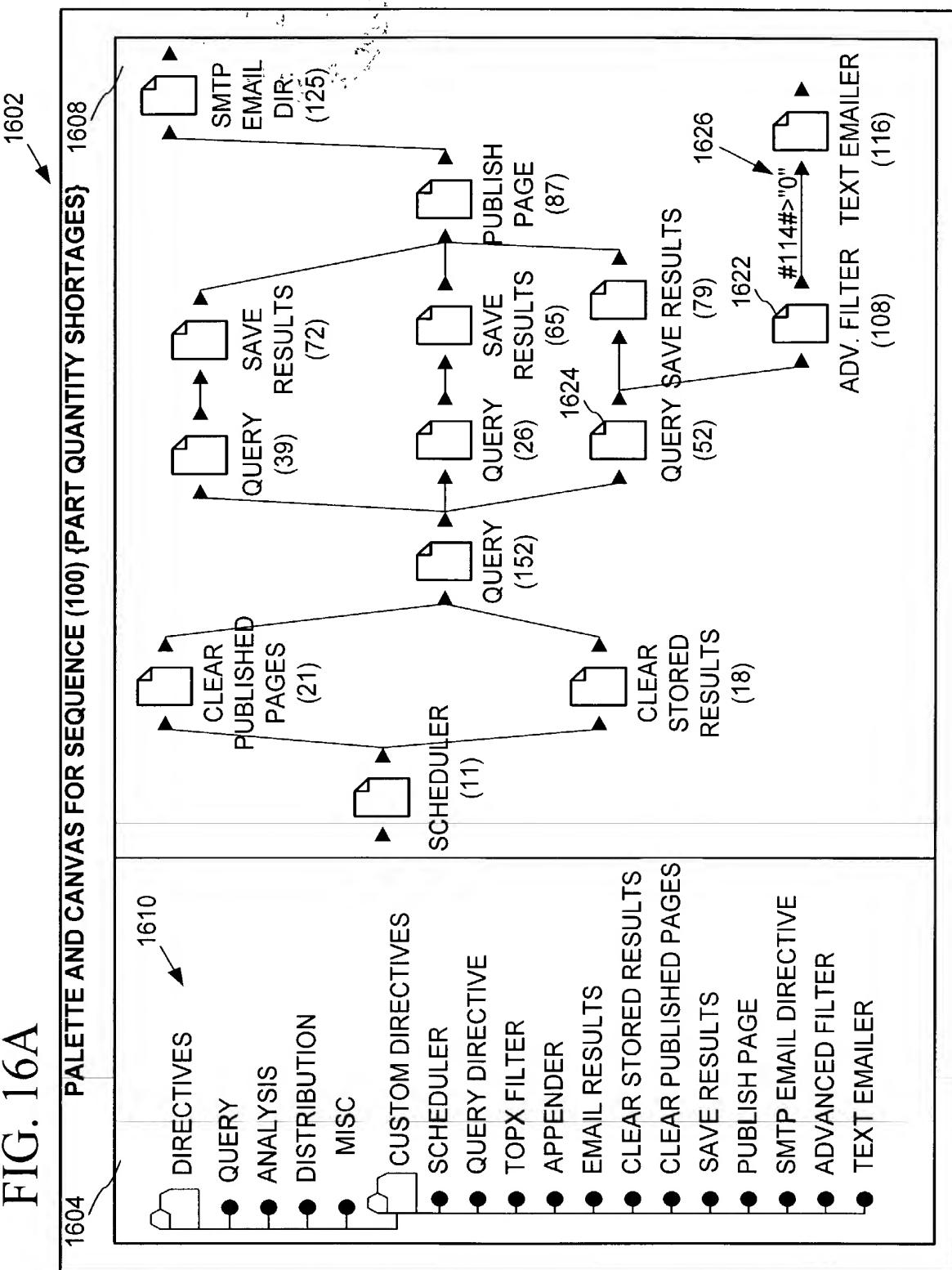
Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No.: 6115-58351, Page 51 of 103
GENERAL INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING,
97204, (503) 226-7391, Inventor: Scherzerich et al., Title: SYSTEMS AND METHODS FOR
Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon

FIG. 15FF

1566

SCHEDULE SEQUENCES				
SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY
TEST SEQUENCE FOR PRIV ▶	Ls		IMMEDIATE ▶	ADD
SELECT SEQUENCE TO VIEW				
TEST SEQUENCE FOR PRIVS AND STEPS ▶			VIEW	
SEQUENCE: INCOME STATEMENT ANALYSIS USER: NB				
ID	DESCRIPTION	STATUS	FREQ	START
1815	INCOME STAT'T ANALYSIS DEC 2001	SCHED	DAILY ▶	23-APR-2001 08:30 PM
				MOD
				DEL
				PRIVILEGES

FIG. 16A



Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scherlrich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No.: 6115-58351, Page 53 of 103

FIG. 16B

1630

SEQUENCE PROPERTIES

X

SEQUENCE NAME: PART QUANTITY SHORTAGES
DESCRIPTION: FINDS PART QUANTITY SHORTAGES
NOTES: SAVE THIS ONE

SEQUENCE AUTHOR: AUTHOR1
SEQUENCE STATUS: STATUS1

GLOBAL VARIABLES:

CAPTION: CONNECT STRING	NAME: CONNECT_STRING
VALUE: JDBC:ORACLE.THIN@123.245.23.1:1521:CONNECT30	
CAPTION: DATABASE USER NAME	NAME: USER_NAME
VALUE: RRIC1234	
CAPTION: DATABASE PASSWORD	NAME: USER_PWD
VALUE: SEQUENCE	
CAPTION: OWNERNAME	NAME: OWNERNAME
VALUE: QRY_ANALYSIS	
CAPTION: CURRENT PERIOD	NAME: CURPERIOD
VALUE: (1997-09) SEP-97	

OK **CANCEL** **ADD VARIABLE**

FIG. 16C

1660

1660

DIRECTIVE PROPERTIES		
ACTIVITY	INPUT	INPUT
PARAM NAME (FILTER_EXP) FILTER EXPRESSION		
#REQUIRED_QUANTITY# >200		
DB3(52) RESULT DATA		
OK		CANCEL

FIG. 17

1702

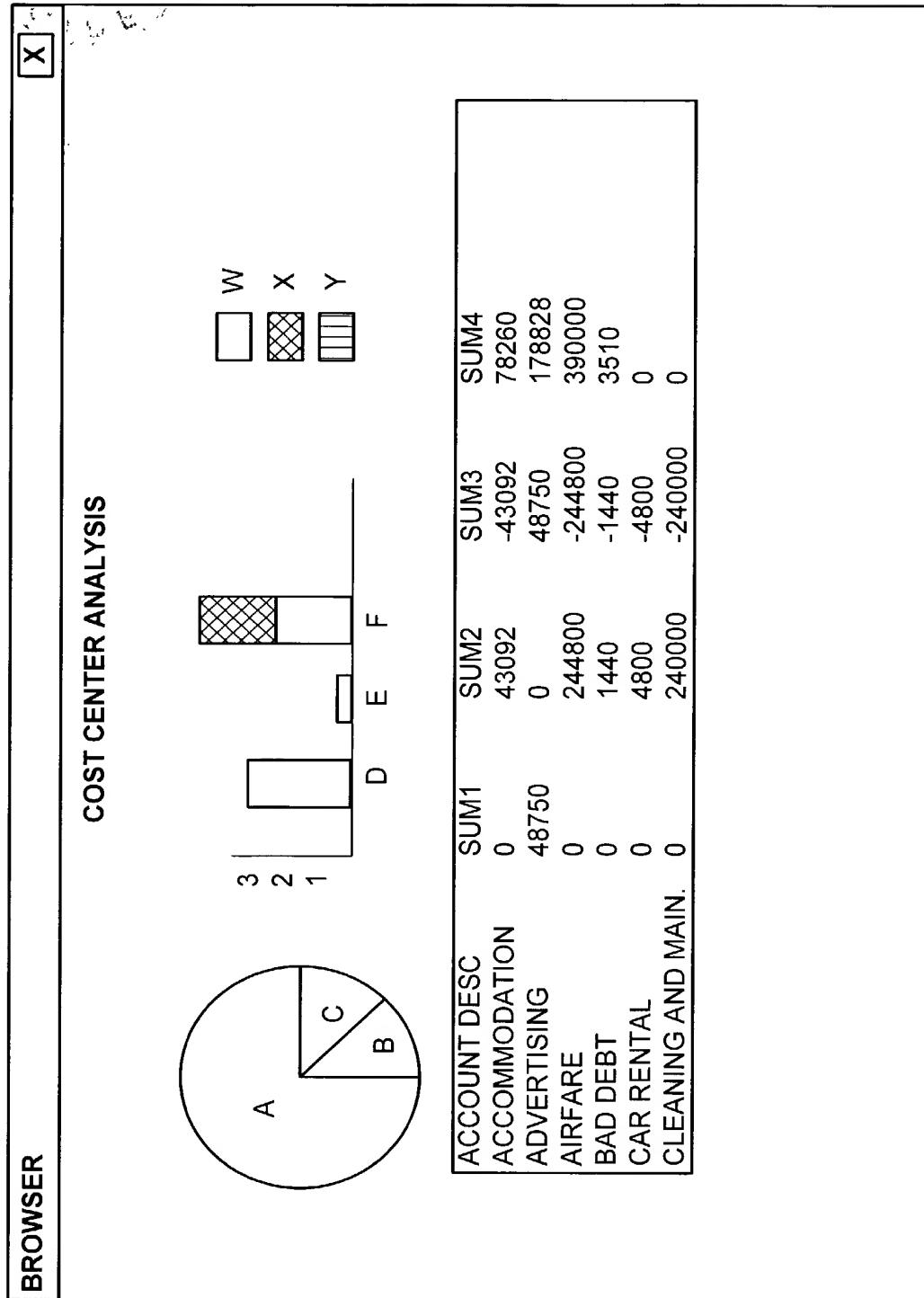


FIG. 18

1801

```
<DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="DB2" DIRECTIVE_NAME="DATA  
DIRECTIVE" THREADING_EFFECT="SPLIT" DIRECTIVE_DESC="SQL  
DATA DIRECTIVE THAT SPLITS RESULTS ON GIVEN COLUMN"  
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"  
DIRECTIVE_CATEGORY="DPA-MISC">  
    <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"  
PORT="9070"/>  
    <IN_PARAMETERS>  
        <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SQL"  
PARAM_DATA_TYPE="STRING" PARAM_NAME="SQL"/>  
        <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="COLUMN TO SPLIT"  
PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLIT_COLUMN"/>  
        <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="CONNECTION  
STRING" PARAM_DATA_TYPE="STRING"  
PARAM_NAME="CONNECTION_STRING"/>  
        <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE USER  
NAME" PARAM_DATA_TYPE="STRING" PARAM_NAME="USERNAME"/>  
        <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE  
PASSWORD" PARAM_DATA_TYPE="STRING" PARAM_NAME="PWD"/>  
    </IN_PARAMETERS>  
    <OUT_PARAMETERS>  
        <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"  
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET"/>  
        <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT  
METADATA" PARAM_DATA_TYPE="STRING"  
PARAM_NAME="RESULTMETADATA"/>  
        <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="SPLIT VALUE"  
PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLITVALUE"/>  
    </OUT_PARAMETERS>  
</DF_DIRECTIVE_DEFINITION>
```

FIG. 19A

1901

```
- <DF_DIRECTIVE_DEFINITION_LIST>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="SB1"
DIRECTIVE_NAME="SCHEDULER" DIRECTIVE_CATEGORY="DPA-MISC"
THREADING_EFFECT="SPLIT" DIRECTIVE_DESC="SCHEDULE DIRECTIVE"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1">
- <!-- CAN ADD A TYPE OR ICON NAME
-->
- <IN_PARAMETERS>
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="FREQUENCY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="FREQUENCY" />
</IN_PARAMETERS>
<OUT_PARAMETERS />
<DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="DB2" DIRECTIVE_NAME="DATA
DIRECTIVE" THREADING_EFFECT="SPLIT" DIRECTIVE_DESC="SQL
DATADIRECTIVE THAT SPLITS RESULTS ON GIVEN COLUMN"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
<DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SQL"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SQL" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="COLUMN TO SPLIT"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLIT_COLUMN" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="CONNECTION STRING"
PARAM_DATA_TYPE="STRING" PARAM_NAME="CONNECTION_STRING" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE USER NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="USERNAME" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE PASSWORD"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PWD" />
</IN_PARAMETERS>
```

FIG. 19B

1902

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="SPLIT VALUE"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLITVALUE" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="AB1" DIRECTIVE_NAME="TOPX
  FILTER" THREADING_EFFECT="STANDARD" DIRECTIVE_DESC="FILTER OUT TOP
  X ROWS FROM RESULTSET" DIRECTIVE_VENDOR="DPA"
  DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="COLUMN POSITION FOR
  TOPX" PARAM_DATA_TYPE="STRING" PARAM_NAME="TOPX_COLUMN" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="AB2"
  DIRECTIVE_NAME="APPENDER" DIRECTIVE_TYPE=""
  THREADING_EFFECT="JOIN" DIRECTIVE_DESC="REJOIN SPLIT RESULTSETS"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
</IN_PARAMETERS>
```

FIG. 19C

1903

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="MB1" DIRECTIVE_NAME="EMAIL
  RESULTS" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
  DIRECTIVE_DESC="SIMPLE EMAIL DIRECTIVE" DIRECTIVE_VENDOR="DPA"
  DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL ADDRESS LIST"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="MAILADR" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SUBJECT LINE"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SUBJECT" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="MESSAGE DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="MESSAGE" />
</IN_PARAMETERS>
<OUT_PARAMETERS />
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="CRB1"
  DIRECTIVE_NAME="CLEAR STORED RESULTS"
  THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
  DIRECTIVE_DESC="REMOVE PREVIOUS RESULT SETS FROM REPOSITORY"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="OWNER ID"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNERID" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTNAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTNAME" />
</IN_PARAMETERS>
<OUT_PARAMETERS />
</DF_DIRECTIVE_DEFINITION>
```

FIG. 19D

1904

```
--<DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="CRC1" DIRECTIVE_NAME="CLEAR  
PUBLISHED PAGES" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""  
DIRECTIVE_DESC="REMOVE PREVIOUS PUBLISHED PAGES FROM  
REPOSITORY" DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"  
DIRECTIVE_CATEGORY="DPA-MISC">  
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"  
  PORT="9070" />  
- <IN_PARAMETERS>  
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="OWNERID"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNERID" />  
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE NAME"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />  
  </IN_PARAMETERS>  
  <OUT_PARAMETERS />  
  </DF_DIRECTIVE_DEFINITION>  
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="SR1" DIRECTIVE_NAME="SAVE  
RESULTS" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""  
DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY"  
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"  
DIRECTIVE_CATEGORY="DPA-MISC">  
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"  
  PORT="9070" />  
- <IN_PARAMETERS>  
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET OWNER"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />  
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />  
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET METADATA"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />  
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET NAME"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTNAME" />  
  </IN_PARAMETERS>  
- <OUT_PARAMETERS>  
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULTSET ID"  
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSETID" />  
  </OUT_PARAMETERS>  
</DF_DIRECTIVE_DEFINITION>
```

FIG. 19E

1905

```
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="CR2" DIRECTIVE_NAME="PUBLISH
PAGE" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""'
DIRECTIVE_DESC="PUBLISHES PAGE & GRANTS SECURITY"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
<DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="GRANT SECURITY LIST"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SECDOC" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="METADATA FOR SECDOC"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SECMETA" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="GRANT SECURITY LIST"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SECCOLNAME" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE OWNER"
PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE SLICE NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGESLICENAME" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE DEFINITION"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGEDEFN" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P1" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P2" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P3" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P4" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P5" />
<PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P6" />
</IN_PARAMETERS>
```

FIG. 19F

1906

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE ID"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGEID" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE OWNER"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE SLICE NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGESLICENAME" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
<DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="DB3" DIRECTIVE_NAME="DATA
DIRECTIVE" THREADING_EFFECT="STANDARD" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" DIRECTIVE_VENDOR="DPA"
DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SQL"
  PARAM_DATA_TYPE="PARAMETERIZED SQL STRING" PARAM_NAME="SQL" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="CONNECTION STRING"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="CONNECTION_STRING" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE USER NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="USERNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE PASSWORD"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PWD" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P1"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P1" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P2"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P2" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P3"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P3" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P4"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P4" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P5"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P5" />
</IN_PARAMETERS>
```

FIG. 19G

1907

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="MB2" DIRECTIVE_NAME="SMTP
EMAIL DIRECTIVE" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="SEND PUBLISHED PAGES" DIRECTIVE_VENDOR="DPA"
DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL ADDRESSES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ADDRDOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="METADATA FOR
ADDRDOC" PARAM_DATA_TYPE="STRING" PARAM_NAME="ADDRMETA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL COLUMN NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ADRCOLNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL COLUMN NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="IDCOLNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SUBJECT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SUBJECT" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE OWNER"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE INSTANCE"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGEINST" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="MAIL FORMAT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FORMAT" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SEND FROM MAIL
ADDRESS" PARAM_DATA_TYPE="STRING" PARAM_NAME="SENDFROM" />
</IN_PARAMETERS>
```

FIG. 19H

1908

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="ERROR MESSAGES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ERROR_MSG" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="ABFILTER"
  DIRECTIVE_NAME="ADVANCED FILTER" THREADING_EFFECT="STANDARD"
  DIRECTIVE_TYPE="" DIRECTIVE_DESC="FILTER RESULTS"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="FILTER EXPRESSION"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FILTER_EXP" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="METADOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSDOC" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULTS METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="METADOC" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULTS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSDOC" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="ROW COUNT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ROWCOUNT" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="TEXTEMAILER"
  DIRECTIVE_NAME="TEXT EMAILER" THREADING_EFFECT="STANDARD"
  DIRECTIVE_TYPE="" DIRECTIVE_DESC="TEXT EMAILER"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
```

FIG. 19I

1909

```
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SUBJECT EXPRESSION"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SUBJECT_EXP" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="MESSAGE EXPRESSION"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="MESSAGE_EXP" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL ADDRESSES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="EMAIL_ADDRESSES" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SEND FROM ADDRESS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FROM_ADDRESS" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="METADOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSDOC" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="ERROR MESSAGES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ERROR" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
</DF_DIRECTIVE_DEFINITION_LIST>
```

FIG. 20A

2001

```
- <RESULTS_DOC>
- <DP_QUERY_DEF VERSION="1">
  <DPA_IDENTIFIERS DATA_SET="NW" WH_OWNER_NAME="RROC" />
  <HINTS />
- <COLUMN_DEFS>
  <COLUMN_DEF COLUMN_SORT_ATTRIBUTE="NONE"
  COLUMN_TEXT="VENDOR_NAME" TABLE_ALIAS="VENDOR_D"
  COLUMN_NAME="VENDOR_NAME" COLUMN_ALIAS="VENDOR_NAME"
  COLUMN_SORT_ORDER="1" COLUMN_POSITION="1"
  COLUMN_TYPE="GROUP_BY" />
  <COLUMN_DEF COLUMN_SORT_ATTRIBUTE="NONE"
  COLUMN_TEXT="PERIOD_KEY" TABLE_ALIAS="AP_INV_DETAIL_F"
  COLUMN_NAME="PERIOD_KEY" COLUMN_ALIAS="PERIOD_KEY"
  COLUMN_SORT_ORDER="2" COLUMN_POSITION="2"
  COLUMN_TYPE="GROUP_BY" />
  <COLUMN_DEF COLUMN_SORT_ATTRIBUTE="DESC"
  COLUMN_TEXT="SUM(AP_INV_DETAIL_F.INVOICE_LINE_AMOUNT)"
  TABLE_ALIAS="AP_INV_DETAIL_F"
  COLUMN_NAME="INVOICE_LINE_AMOUNT"
  COLUMN_ALIAS="SUM_INVOICE_LINE_AMOUNT"
  COLUMN_SORT_ORDER="3" COLUMN_POSITION="3"
  COLUMN_TYPE="AGGREGATE" />
</COLUMN_DEFS>
- <TABLE_DEFS>
  <TABLE_DEF TABLE_ALIAS="AP_INV_DETAIL_F"
  TABLE_NAME="AP_INV_DETAIL_F" />
  <TABLE_DEF TABLE_ALIAS="VENDOR_D" TABLE_NAME="VENDOR_D" />
</TABLE_DEFS>
- <DETAIL_FILTERS>
- <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="VENDOR_TYPE"
  TABLE_ALIAS="VENDOR_D" FILTER_PREC_OPER="AND"
  FILTER_OPERATOR="=>
  <FILTER_VALUE VALUE_DATA_TYPE="STRING">EMPLOYEE</
  FILTER_VALUE>
</FILTER>
```

FIG. 20B

2002

```
- <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="COMPANY_KEY"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR="=">
<FILTER_VALUE VALUE_DATA_TYPE="STRING">01</FILTER_VALUE>
</FILTER>
</DETAIL_FILTERS>
- <AGGREGATE_FILTERS>
- <FILTER FILTER_TYPE="VALUE"
COLUMN_TEXT="SUM(INVOICE_LINE_AMOUNT)"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR="">>
<FILTER_VALUE VALUE_DATA_TYPE="NUMBER">0</FILTER_VALUE>
</FILTER>
</AGGREGATE_FILTERS>
</DP_QUERY_DEF>
<DPA_QUERY_SERVER_INFO SERVICE="DPA_QUERY_SERVER"
MACHINE="EXH_2K" PORT="8069"
WAREHOUSE_SERVER="HD.DPAPPLICATIONS.COM"
WAREHOUSE_DBNAME="DEMO30"
WAREHOUSE_OWNER="RROC">FOODADDY</
DPA_QUERY_SERVER_INFO>
- <DP_DS_METADATA>
<DP_COLUMN COLUMN_NAME="VENDOR_NAME"
COLUMN_DATA_TYPE="VARCHAR2" COLUMN_DS_ALIAS="C1"
COLUMN_TYPE="GROUP_BY" COLUMN_SORT_ATTRIBUTE="NONE"
COLUMN_SOURCE_ALIAS="VENDOR_NAME"
COLUMN_LABEL="VENDOR NAME" COLUMN_DESC=""
COLUMN_IS_CURRENCY="N" />
<DP_COLUMN COLUMN_NAME="PERIOD_KEY"
COLUMN_DATA_TYPE="VARCHAR2" COLUMN_DS_ALIAS="C2"
COLUMN_TYPE="GROUP_BY" COLUMN_SORT_ATTRIBUTE="NONE"
COLUMN_SOURCE_ALIAS="PERIOD_KEY" COLUMN_LABEL="PERIOD
KEY" COLUMN_DESC="" COLUMN_IS_CURRENCY="N" />
<DP_COLUMN COLUMN_NAME="SUM_INVOICE_LINE_AMOUNT"
COLUMN_DATA_TYPE="NUMBER" COLUMN_DS_ALIAS="C3"
COLUMN_TYPE="AGGREGATE" COLUMN_SORT_ATTRIBUTE="DESC"
COLUMN_SOURCE_ALIAS="SUM_INVOICE_LINE_AMOUNT"
COLUMN_LABEL="INVOICE LINE AMOUNT" COLUMN_DESC=""
COLUMN_IS_CURRENCY="Y" />
```

FIG. 20C

2003

```
</DP_DS_METADATA>
- <DP_DS>
- <R>
<C1>JAMIE FROST</C1>
<C2>DEC-97</C2>
<C3>28159</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>JAN-98</C2>
<C3>15114.76</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>FEB-98</C2>
<C3>4417.86</C3>
</R>
- <R>
<C1>KERRY JONES</C1>
<C2>APR-98</C2>
<C3>3439.10</C3>
</R>
- <R>
<C1>KERRY JONES</C1>
<C2>DEC-97</C2>
<C3>3263</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>NOV-97</C2>
<C3>2907.85</C3>
</R>
- <R>
<C1>KERRY JONES</C1>
<C2>FEB-98</C2>
<C3>2799.31</C3>
</R>
```

FIG. 20D

2004

```
- <R>
<C1>KERRY JONES</C1>
<C2>MAY-98</C2>
<C3>2698.64</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>APR-98</C2>
<C3>2657.20</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>MAY-98</C2>
<C3>2549.68</C3>
</R>
- <R>
<C1>KERRY JONES</C1>
<C2>MAR-98</C2>
<C3>2511.98</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>MAR-98</C2>
<C3>2459.87</C3>
</R>
- <R>
<C1>JAMIE FROST</C1>
<C2>JUN-98</C2>
<C3>2219.90</C3>
</R>
- <R>
<C1>KERRY JONES</C1>
<C2>JUN-98</C2>
<C3>2182.29</C3>
</R>
- <R>
<C1>KERRY JONES</C1>
<C2>JAN-98</C2>
<C3>1516</C3>
</R>
```

FIG. 20E

```
- <R>
<C1>BLACK, CHRIS</C1>
<C2>NOV-97</C2>
<C3>651.06</C3>
</R>
</DP_DS>
</RESULTS_DOC>
```

2005

FIG. 21A

2101

```
- <DF_WORKFLOW VERSION="1">
  <DF_WORKFLOW_HEADER DF_EDITOR_MAX_ID="172" FLOW_NAME="QTY
ANALYSIS" FLOW_DESCRIPTION="QTY ANALYSIS FLOW" FLOW_STATUS="FLOW
STATUS" FLOW_NOTES="" FLOW_AUTHOR="FLOW AUTHOR" />
- <DF_WORKFLOW_PARAMETERS>
- <PARAMETER NODE_ID="13" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECT STRING" PARAM_NAME="CONNECT_STRING"
PARAM_TYPE="OUT">
  <PARAM_SOURCE
PARAM_TYPE="VALUE">JDBC:ORACLE:THIN:@172.16.1.34:1521:DEMO30</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="14" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USER_NAME"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">RROC609</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="15" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="USER_PWD"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DPA</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="16" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="OWNERNAME" PARAM_NAME="OWNERNAME"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">QTY_ANALYSIS</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="17" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CURRENT PERIOD" PARAM_NAME="CURRPERIOD"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">(1997-09) SEP-97</
PARAM_SOURCE>
</PARAMETER>
</DF_WORKFLOW_PARAMETERS>
- <DF_WORKFLOW_ACTIVITIES>
- <ACTIVITY NODE_ID="11">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="SCHEDULER" THREADING_EFFECT="SPLIT"
DIRECTIVE_ID="SB1" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="SCHEDULE
DIRECTIVE" />
```

FIG. 21B

2102

```
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="12" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="FREQUENCY" PARAM_NAME="FREQUENCY"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">0</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
<ACTIVITY_OUT_PARAMETERS />
</ACTIVITY>
- <ACTIVITY NODE_ID="18">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="CLEAR STORED RESULTS"
THREADING_EFFECT="STANDARD" DIRECTIVE_ID="CRB1" DIRECTIVE_TYPE=""
DIRECTIVE_VERSION="1" DIRECTIVE_DESC="REMOVE PREVIOUS RESULT SETS
FROM REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="19" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="OWNER ID" PARAM_NAME="OWNERID" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="20" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTNAME" PARAM_NAME="RESULTNAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">*</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
<ACTIVITY_OUT_PARAMETERS />
</ACTIVITY>
- <ACTIVITY NODE_ID="21">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="CLEAR PUBLISHED PAGES"
THREADING_EFFECT="STANDARD" DIRECTIVE_ID="CRC1" DIRECTIVE_TYPE=""
DIRECTIVE_VERSION="1" DIRECTIVE_DESC="REMOVE PREVIOUS PUBLISHED
PAGES FROM REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="22" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="OWNERID" PARAM_NAME="OWNERID" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21C

2103

```
<PARAMETER NODE_ID="23" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">*</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
<ACTIVITY_OUT_PARAMETERS />
</ACTIVITY>
- <ACTIVITY NODE_ID="26">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="DETAIL QUERY" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="DATA DIRECTIVE" THREADING_EFFECT="STANDARD"
DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="27" PARAM_DATA_TYPE="PARAMETERIZED SQL
STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
COMPONENT_ITEM_DESC,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ISSUED)
QUANTITY_ISSUED,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ON_HAND)
QUANTITY_ON_HAND,SUM(NW_DISC_SHORTAGE_F.QUANTITY_SHORT)
QUANTITY_SHORT,SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY)
REQUIRED_QUANTITY FROM NW_COMPONENT_ITEM_D_0
NW_COMPONENT_ITEM_D,NW_DISC_SHORTAGE_F_0
NW_DISC_SHORTAGE_F,NW_ORG_PERIOD_D_0
NW_ORG_PERIOD_D,NW_WIP_ENTITY_D_0 NW_WIP_ENTITY_D WHERE
NW_DISC_SHORTAGE_F.COMPONENT_ITEM_KEY =
NW_COMPONENT_ITEM_D.COMPONENT_ITEM_KEY AND
NW_DISC_SHORTAGE_F.ORG_PERIOD_KEY =
NW_ORG_PERIOD_D.ORG_PERIOD_KEY AND
NW_DISC_SHORTAGE_F.WIP_ENTITY_KEY
=NW_WIP_ENTITY_D.WIP_ENTITY_KEY AND NW_ORG_PERIOD_D.ORG_PERIOD
= '#P1#' GROUP BY NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
HAVING SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY) > 0 ORDER BY
REQUIRED_QUANTITY DESC, COMPONENT_ITEM_DESC, REQUIRED_QUANTITY,
QUANTITY_ISSUED, QUANTITY_SHORT, QUANTITY_ON_HAND</
PARAM_SOURCE>
</PARAMETER>
```

FIG. 21D

2104

```
-<PARAMETER NODE_ID="28" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="CONNECTION STRING"  
PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="29" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"  
PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">14</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="30" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"  
PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">15</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="31" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">17</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="32" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="33" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="34" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>  
</PARAMETER>  
-<PARAMETER NODE_ID="35" PARAM_DATA_TYPE="STRING"  
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">  
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>  
</PARAMETER>  
</ACTIVITY_IN_PARAMETERS>
```

FIG. 21E

2105

```
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="36" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="37" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="39">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="TREND QUERY" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="DATA DIRECTIVE" THREADING_EFFECT="STANDARD"
DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="40" PARAM_DATA_TYPE="PARAMETERIZED_SQL
STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
NW_ORG_PERIOD_D.ORG_PERIOD
PERIOD_NAME, SUM(NW_DISC_SHORTAGE_F.QUANTITY_ISSUED)
QUANTITY_ISSUED, SUM(NW_DISC_SHORTAGE_F.QUANTITY_ON_HAND)
QUANTITY_ON_HAND, SUM(NW_DISC_SHORTAGE_F.QUANTITY_SHORT)
QUANTITY_SHORT, SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY)
REQUIRED_QUANTITY FROM NW_DISC_SHORTAGE_F_0
NW_DISC_SHORTAGE_F, NW_ORG_PERIOD_D_0 NW_ORG_PERIOD_D WHERE
NW_DISC_SHORTAGE_F.ORG_PERIOD_KEY =
NW_ORG_PERIOD_D.ORG_PERIOD_KEY GROUP BY
NW_ORG_PERIOD_D.ORG_PERIOD ORDER BY PERIOD_NAME DESC</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="41" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECTION STRING"
PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21F

2106

```
- <PARAMETER NODE_ID="42" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">14</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="43" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">15</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="44" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">17</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="45" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="46" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="47" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="48" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="49" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="50" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
```

FIG. 21G

2107

```
- <ACTIVITY NODE_ID="52">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
  ACTIVITY_DESCRIPTION="SUMMARY QUERY" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
  DIRECTIVE_NAME="DATA DIRECTIVE" THREADING_EFFECT="STANDARD"
  DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
  DATA AND ASSEMBLE INTO RESULT SET" />
  - <ACTIVITY_IN_PARAMETERS>
    - <PARAMETER NODE_ID="53" PARAM_DATA_TYPE="PARAMETERIZED SQL
    STRING" PARAM_Caption="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
      <PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
      NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
      COMPONENT_ITEM_DESC,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ISSUED)
      QUANTITY_ISSUED,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ON_HAND)
      QUANTITY_ON_HAND,SUM(NW_DISC_SHORTAGE_F.QUANTITY_SHORT)
      QUANTITY_SHORT,SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY)
      REQUIRED_QUANTITY FROM NW_COMPONENT_ITEM_D_0
      NW_COMPONENT_ITEM_D,NW_DISC_SHORTAGE_F_0
      NW_DISC_SHORTAGE_F,NW_ORG_PERIOD_D_0
      NW_ORG_PERIOD_D,NW_WIP_ENTITY_D_0 NW_WIP_ENTITY_D WHERE
      NW_DISC_SHORTAGE_F.COMPONENT_ITEM_KEY =
      NW_COMPONENT_ITEM_D.COMPONENT_ITEM_KEY AND
      NW_DISC_SHORTAGE_F.ORG_PERIOD_KEY =
      NW_ORG_PERIOD_D.ORG_PERIOD_KEY AND
      NW_DISC_SHORTAGE_F.WIP_ENTITY_KEY
      =NW_WIP_ENTITY_D.WIP_ENTITY_KEY AND NW_ORG_PERIOD_D.ORG_PERIOD
      = '#P1#' GROUP BY NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
      HAVING SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY) > 0 ORDER BY
      REQUIRED_QUANTITY DESC, COMPONENT_ITEM_DESC, REQUIRED_QUANTITY,
      QUANTITY_ISSUED, QUANTITY_SHORT, QUANTITY_ON_HAND</
      PARAM_SOURCE>
    </PARAMETER>
    - <PARAMETER NODE_ID="54" PARAM_DATA_TYPE="STRING"
    PARAM_Caption="CONNECTION STRING"
    PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
      <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
    </PARAMETER>
    - <PARAMETER NODE_ID="55" PARAM_DATA_TYPE="STRING"
    PARAM_Caption="DATABASE USER NAME" PARAM_NAME="USERNAME"
    PARAM_TYPE="IN">
      <PARAM_SOURCE PARAM_TYPE="ID">14</PARAM_SOURCE>
    </PARAMETER>
```

FIG. 21H

2108

```
- <PARAMETER NODE_ID="56" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">15</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="57" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">17</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="58" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="59" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="60" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="61" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="62" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="63" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
```

FIG. 21I

2109

```
- <ACTIVITY NODE_ID="65">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
  ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
  THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SAVE RESULTS"
  DIRECTIVE_ID="SR1" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
  DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="66" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET OWNER" PARAM_NAME="OWNER"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="67" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET" PARAM_NAME="RESULTSET"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">36</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="68" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET METADATA"
  PARAM_NAME="RESULTMETADATA" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">37</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="69" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET NAME" PARAM_NAME="RESULTNAME"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DETAIL</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="70" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULTSET ID" PARAM_NAME="RESULTSETID"
  PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="72">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
  ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
  THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SAVE RESULTS"
  DIRECTIVE_ID="SR1" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
  DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY" />
```

FIG. 21J

2110

```
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="73" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET OWNER" PARAM_NAME="OWNER"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="74" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET" PARAM_NAME="RESULTSET"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">49</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="75" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET METADATA"
PARAM_NAME="RESULTMETADATA" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">50</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="76" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET NAME" PARAM_NAME="RESULTNAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">TREND</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="77" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTSET ID" PARAM_NAME="RESULTSETID"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="79">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SAVE RESULTS"
DIRECTIVE_ID="SR1" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="80" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET OWNER" PARAM_NAME="OWNER"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21K

2111

```
- <PARAMETER NODE_ID="81" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET" PARAM_NAME="RESULTSET" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">62</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="82" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">63</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="83" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET NAME" PARAM_NAME="RESULTNAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">SUMMARY</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="84" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTSET ID" PARAM_NAME="RESULTSETID"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="87">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="PUBLISH PAGE"
DIRECTIVE_ID="CR2" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="PUBLISHES PAGE & GRANTS SECURITY" />
<ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="88" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="GRANT SECURITY LIST" PARAM_NAME="SECDOC"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">162</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="89" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="METADATA FOR SECDOC" PARAM_NAME="SECMETA"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">163</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21L

- <PARAMETER NODE_ID="90" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="GRANT SECURITY LIST" PARAM_NAME="SECCOLNAME" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="VALUE">USERNAME</PARAM_SOURCE>
 </PARAMETER>
- <PARAMETER NODE_ID="91" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="PAGE OWNER" PARAM_NAME="OWNER" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
 </PARAMETER>
- <PARAMETER NODE_ID="92" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="VALUE">STARTPAGE</PARAM_SOURCE>
 </PARAMETER>
- <PARAMETER NODE_ID="93" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="PAGE SLICE NAME" PARAM_NAME="PAGESLICENAME" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="VALUE">FIRST</PARAM_SOURCE>
 </PARAMETER>
- <PARAMETER NODE_ID="94" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="PAGE DEFINITION" PARAM_NAME="PAGEDEFN" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="VALUE"><DP_PAGE_DEF><LAYER
 LAYER_TYPE="HORIZONTAL" LAYER_BORDER="0" LAYER_PADDING="3"
 LAYER_HEIGHT="100%" LAYER_WIDTH="100%"><LAYER
 LAYER_TYPE="VERTICAL" LAYER_PADDING="3" LAYER_BORDER="0"
 LAYER_HEIGHT="225" LAYER_WIDTH="100%"><LAYER LAYER_TYPE="WIDGET"
 LAYER_HEIGHT="100%" LAYER_WIDTH="50%"><WIDGET
 WIDGET_ID="DP_PIE_CHART"><PARAMETERS><PARAM
 PARAM_NAME="TITLE">MY PIE</PARAM><PARAM PARAM_NAME="DSID">#P3#</PARAM><PARAM PARAM_NAME="VALUECOL">REQUIRED_QUANTITY</PARAM><PARAM PARAM_NAME="LABELCOL">COMPONENT_ITEM_DESC</PARAM><PARAM PARAM_NAME="FILTERTYPE">TOP</PARAM><PARAM
 PARAM_NAME="FILTERVAL">10</PARAM></PARAMETERS></WIDGET></LAYER><LAYER LAYER_TYPE="WIDGET" LAYER_HEIGHT="100%"
 LAYER_WIDTH="50%"><WIDGET
 WIDGET_ID="DP_BAR_CHART2"><PARAMETERS><PARAM
 PARAM_NAME="TITLE">MY CHART TITLE</PARAM><PARAM
 PARAM_NAME="DSID">#P2#</PARAM><PARAM
 PARAM_NAME="MEASURECOLS">QUANTITY_ON_HAND|QUANTITY_ISSUED|QUANTITY_SHORT|REQUIRED_QUANTITY</PARAM><PARAM
 PARAM_NAME="XAXISLABELS">ON HAND|ISSUED|SHORT|REQUIRED</PARAM><PARAM PARAM_NAME="SERIESCOL">PERIOD_NAME</PARAM></PARAMETERS></WIDGET></LAYER><LAYER
 LAYER_TYPE="HORIZONTAL" LAYER_BORDER="0" LAYER_PADDING="3"

2112

FIG. 21M

LAYER_HEIGHT="80%" LAYER_WIDTH="100%"><LAYER LAYER_TYPE="WIDGET"
LAYER_HEIGHT="100%" LAYER_WIDTH="100%"><WIDGET
WIDGET_ID="DP_REPORT_VIEWER"><PARAMETERS><PARAM
PARAM_NAME="TITLE">MY TITLE</PARAM> <PARAM
PARAM_NAME="DSID">#P1#</PARAM></PARAMETERS></WIDGET></LAYER></LAYER></DP_PAGE_DEF></PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="95" PARAM_DATA_TYPE="STRING"
PARAM_Caption="IN RESULTS KEY" PARAM_NAME="P1" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="96" PARAM_DATA_TYPE="STRING"
PARAM_Caption="IN RESULTS KEY" PARAM_NAME="P2" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">77</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="97" PARAM_DATA_TYPE="STRING"
PARAM_Caption="IN RESULTS KEY" PARAM_NAME="P3" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">84</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="98" PARAM_DATA_TYPE="STRING"
PARAM_Caption="IN RESULTS KEY" PARAM_NAME="P4" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="99" PARAM_DATA_TYPE="STRING"
PARAM_Caption="IN RESULTS KEY" PARAM_NAME="P5" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="100" PARAM_DATA_TYPE="STRING"
PARAM_Caption="IN RESULTS KEY" PARAM_NAME="P6" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="101" PARAM_DATA_TYPE="STRING"
PARAM_Caption="PAGE ID" PARAM_NAME="PAGEID" PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="102" PARAM_DATA_TYPE="STRING"
PARAM_Caption="PAGE OWNER" PARAM_NAME="OWNER"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>

2113

FIG. 21N

- <PARAMETER NODE_ID="103" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME" PARAM_TYPE="OUT">
 <PARAM_SOURCE />
 </PARAMETER>
- <PARAMETER NODE_ID="104" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="PAGE SLICE NAME" PARAM_NAME="PAGESLICENAME" PARAM_TYPE="OUT">
 <PARAM_SOURCE />
 </PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="108">
 <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES" ACTIVITY_DESCRIPTION="OUTOF BOUNDS QTY" />
 <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA" THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="ADVANCED FILTER" DIRECTIVE_ID="ABFILTER" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="FILTER RESULTS" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="109" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="FILTER EXPRESSION" PARAM_NAME="FILTER_EXP" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="VALUE">#REQUIRED_QUANTITY# > 200</PARAM_SOURCE>
 </PARAMETER>
- <PARAMETER NODE_ID="110" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="RESULTS METADATA" PARAM_NAME="METADOC" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="ID">63</PARAM_SOURCE>
 </PARAMETER>
- <PARAMETER NODE_ID="111" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="RESULTS" PARAM_NAME="RESULTSDOC" PARAM_TYPE="IN">
 <PARAM_SOURCE PARAM_TYPE="ID">62</PARAM_SOURCE>
 </PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="112" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="RESULTS METADATA" PARAM_NAME="METADOC" PARAM_TYPE="OUT">
 <PARAM_SOURCE />
 </PARAMETER>

2114

FIG. 210

-<PARAMETER NODE_ID="113" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="RESULTS" PARAM_NAME="RESULTSDOC" PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>

-<PARAMETER NODE_ID="114" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="ROW COUNT" PARAM_NAME="ROWCOUNT" PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>

</ACTIVITY_OUT_PARAMETERS>

</ACTIVITY>

-<ACTIVITY NODE_ID="116">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES" ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA" THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="TEXT EMAILER" DIRECTIVE_ID="TEXTEMAILER" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="TEXT EMAILER" />

-<ACTIVITY_IN_PARAMETERS>

-<PARAMETER NODE_ID="117" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="SUBJECT EXPRESSION" PARAM_NAME="SUBJECT_EXP" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">OUT OF BOUNDS QTY CONDITION</PARAM_SOURCE>
</PARAMETER>

-<PARAMETER NODE_ID="118" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="MESSAGE EXPRESSION" PARAM_NAME="MESSAGE_EXP" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">COMPONENT:
#COMPONENT_ITEM_DESC# REQUIRES #REQUIRED_QUANTITY# ADDITIONAL UNITS</PARAM_SOURCE>
</PARAMETER>

-<PARAMETER NODE_ID="119" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="EMAIL ADDRESSES" PARAM_NAME="EMAIL_ADDRESSES" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">EXH@DPAPPLICATIONS.COM</PARAM_SOURCE>
</PARAMETER>

-<PARAMETER NODE_ID="120" PARAM_DATA_TYPE="STRING" PARAM_CAPTION="SEND FROM ADDRESS" PARAM_NAME="FROM_ADDRESS" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">DF@DPAPPLICATIONS.COM</PARAM_SOURCE>
</PARAMETER>

2115

FIG. 21P

2116

```
- <PARAMETER NODE_ID="121" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS METADATA" PARAM_NAME="METADOC"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">112</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="122" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS" PARAM_NAME="RESULTSDOC" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">113</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="123" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="ERROR MESSAGES" PARAM_NAME="ERROR"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="125">
<ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="EMAIL LINK" />
<ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SMTP EMAIL DIRECTIVE"
DIRECTIVE_ID="MB2" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="SEND PUBLISHED PAGES" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="126" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL ADDRESSES" PARAM_NAME="ADDRDOC"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">162</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="127" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="METADATA FOR ADDRDOC" PARAM_NAME="ADDRMETA"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">163</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="128" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL COLUMN NAME" PARAM_NAME="ADRCOLNAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">EMAIL_ADDRESS</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21Q

2117

```
- <PARAMETER NODE_ID="129" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL COLUMN NAME" PARAM_NAME="IDCOLNAME"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">USERNAME</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="130" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="SUBJECT" PARAM_NAME="SUBJECT" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">QTY ANALYSIS UPDATED</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="131" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE OWNER" PARAM_NAME="OWNER" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">102</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="132" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">103</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="133" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE INSTANCE" PARAM_NAME="PAGEINST"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">104</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="134" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="MAIL FORMAT" PARAM_NAME="FORMAT" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">DYNAM</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="135" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="SEND FROM MAIL ADDRESS" PARAM_NAME="SENDERFROM"
PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="VALUE">DF@DPAPPLICATIONS.COM</
PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="136" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="ERROR MESSAGES" PARAM_NAME="ERROR_MSG"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
```

FIG. 21R

2118

```
- <ACTIVITY NODE_ID="152">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
  ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
  THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="DATA DIRECTIVE"
  DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
  DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="153" PARAM_DATA_TYPE="PARAMETERIZED SQL
  STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
  USERNAME,EMAIL_ADDRESS FROM OA3.DF_QTYAPP_USERS</
  PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="154" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="CONNECTION STRING"
  PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
  <PARAM_SOURCE
  PARAM_TYPE="VALUE">JDBC:ORACLE:THIN:@HD.DPAPPLICATIONS.COM:1521:N
  RB816</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="155" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">OA3</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="156" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">OA3</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="157" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="158" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="159" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
```

FIG. 21S

2119

```
- <PARAMETER NODE_ID="160" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="161" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="162" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="163" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
</DF_WORKFLOW_ACTIVITIES>
- <DF_WORKFLOW_TRANSITIONS>
  <TRANSITION NODE_ID="24" FROM_ACTIVITY_ID="11" TO_ACTIVITY_ID="18"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="25" FROM_ACTIVITY_ID="11" TO_ACTIVITY_ID="21"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="71" FROM_ACTIVITY_ID="26" TO_ACTIVITY_ID="65"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="78" FROM_ACTIVITY_ID="39" TO_ACTIVITY_ID="72"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="85" FROM_ACTIVITY_ID="52" TO_ACTIVITY_ID="79"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="105" FROM_ACTIVITY_ID="65" TO_ACTIVITY_ID="87"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="106" FROM_ACTIVITY_ID="72" TO_ACTIVITY_ID="87"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="107" FROM_ACTIVITY_ID="79" TO_ACTIVITY_ID="87"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="115" FROM_ACTIVITY_ID="52" TO_ACTIVITY_ID="108"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="124" FROM_ACTIVITY_ID="108" TO_ACTIVITY_ID="116"
TRANSITION_EXPRESSION="#114# > "0"" DESCRIPTION="EMAIL ONLY EXCEPTIONS"
NOTES="NOTES" />
```

FIG. 21T

2120

```
<TRANSITION NODE_ID="137" FROM_ACTIVITY_ID="87" TO_ACTIVITY_ID="125" TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="164" FROM_ACTIVITY_ID="18" TO_ACTIVITY_ID="152" TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="165" FROM_ACTIVITY_ID="21" TO_ACTIVITY_ID="152" TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="166" FROM_ACTIVITY_ID="152" TO_ACTIVITY_ID="26" TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="167" FROM_ACTIVITY_ID="152" TO_ACTIVITY_ID="39" TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="168" FROM_ACTIVITY_ID="152" TO_ACTIVITY_ID="52" TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
</DF_WORKFLOW_TRANSITIONS>
-<DF_WORKFLOW_EDITOR>
<ACTIVITY_VISUAL_EDITING NODE_ID="11" YCOORD="140" XCOORD="12" />
<ACTIVITY_VISUAL_EDITING NODE_ID="18" YCOORD="330" XCOORD="47" />
<ACTIVITY_VISUAL_EDITING NODE_ID="21" YCOORD="50" XCOORD="60" />
<ACTIVITY_VISUAL_EDITING NODE_ID="26" YCOORD="200" XCOORD="294" />
<ACTIVITY_VISUAL_EDITING NODE_ID="39" YCOORD="70" XCOORD="294" />
<ACTIVITY_VISUAL_EDITING NODE_ID="52" YCOORD="320" XCOORD="304" />
<ACTIVITY_VISUAL_EDITING NODE_ID="65" YCOORD="200" XCOORD="408" />
<ACTIVITY_VISUAL_EDITING NODE_ID="72" YCOORD="70" XCOORD="408" />
<ACTIVITY_VISUAL_EDITING NODE_ID="79" YCOORD="320" XCOORD="428" />
<ACTIVITY_VISUAL_EDITING NODE_ID="87" YCOORD="200" XCOORD="537" />
<ACTIVITY_VISUAL_EDITING NODE_ID="108" YCOORD="430" XCOORD="359" />
<ACTIVITY_VISUAL_EDITING NODE_ID="116" YCOORD="420" XCOORD="587" />
<ACTIVITY_VISUAL_EDITING NODE_ID="125" YCOORD="320" XCOORD="580" />
<ACTIVITY_VISUAL_EDITING NODE_ID="152" YCOORD="200" XCOORD="160" />
</DF_WORKFLOW_EDITOR>
</DF_WORKFLOW>
```

FIG. 22A

2201

```
<DP_QUERY_DEF VERSION="1">
  <DPA_IDENTIFIERS DATA_SET="OAS" WH_OWNER_NAME="PART"/>
  <HINTS/>
  <COLUMN_DEFS>
    <COLUMN_DEF SUMMARY_TYPE="SUM" COLUMN_NAME="PTD_BUDGET"
    COLUMN_ALIAS="PTD_BUDGET" COLUMN_SORT_ORDER="3"
    COLUMN_SORT_ATTRIBUTE="NONE" COLUMN_TYPE="MEASURE"
    COLUMN_EXPR="" COLUMN_POSITION="3" TABLE_ALIAS="INCOME_STMT_A"
    COLUMN_TAG="PTD_BUDGET"/>
    <COLUMN_DEF SUMMARY_TYPE="NONE" COLUMN_NAME="LINE_NAME"
    COLUMN_ALIAS="LINE_NAME" COLUMN_SORT_ORDER="1"
    COLUMN_SORT_ATTRIBUTE="ASC" COLUMN_TYPE="ATTRIBUTE"
    COLUMN_EXPR="" COLUMN_POSITION="1" TABLE_ALIAS="INC_STMT_LINES_D"
    COLUMN_TAG="LINE_NAME"/>
    <COLUMN_DEF SUMMARY_TYPE="SUM"
    COLUMN_NAME="PTD_VARIANCE_PCT" COLUMN_ALIAS="PTD_VARIANCE_PCT"
    COLUMN_SORT_ORDER="6" COLUMN_SORT_ATTRIBUTE="NONE"
    COLUMN_TYPE="MEASURE" COLUMN_EXPR="" COLUMN_POSITION="6"
    TABLE_ALIAS="INCOME_STMT_A" COLUMN_TAG="PTD_VAR_PCT"/>
    <COLUMN_DEF SUMMARY_TYPE="NONE"
    COLUMN_NAME="DEPARTMENT_DESC" COLUMN_ALIAS="DEPT_DESC"
    COLUMN_SORT_ORDER="2" COLUMN_SORT_ATTRIBUTE="ASC"
    COLUMN_TYPE="ATTRIBUTE" COLUMN_EXPR="" COLUMN_POSITION="2"
    TABLE_ALIAS="DEPARTMENT_D" COLUMN_TAG="DEPT_DESC"/>
    <COLUMN_DEF SUMMARY_TYPE="SUM" COLUMN_NAME="PTD_VARIANCE"
    COLUMN_ALIAS="PTD_VARIANCE" COLUMN_SORT_ORDER="5"
    COLUMN_SORT_ATTRIBUTE="NONE" COLUMN_TYPE="MEASURE"
    COLUMN_EXPR="" COLUMN_POSITION="5" TABLE_ALIAS="INCOME_STMT_A"
    COLUMN_TAG="PTD_VAR"/>
    <COLUMN_DEF SUMMARY_TYPE="SUM" COLUMN_NAME="PTD_ACTUAL"
    COLUMN_ALIAS="PTD_ACTUAL" COLUMN_SORT_ORDER="4"
    COLUMN_SORT_ATTRIBUTE="NONE" COLUMN_TYPE="MEASURE"
    COLUMN_EXPR="" COLUMN_POSITION="4" TABLE_ALIAS="INCOME_STMT_A"
    COLUMN_TAG="PTD_ACTUAL"/>
  </COLUMN_DEFS>
```

FIG. 22B

2202

```
<TABLE_DEFS>
  <TABLE_DEF TABLE_ALIAS="VENDOR_D" TABLE_NAME="VENDOR_D"/>
  <TABLE_DEF TABLE_ALIAS="AP_INV_DETAIL_F"
  TABLE_NAME="AP_INV_DETAIL_F"/>
  <TABLE_DEF TABLE_ALIAS="INCOME_STMT_A"
  TABLE_NAME="INCOME_STMT_A"/>
  <TABLE_DEF TABLE_ALIAS="DEPARTMENT_D"
  TABLE_NAME="DEPARTMENT_D"/>
  <TABLE_DEF TABLE_ALIAS="INC_STMT_LINES_D"
  TABLE_NAME="INC_STMT_LINES_D"/>
</TABLE_DEFS>
<DETAIL_FILTERS>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="PERIOD_KEY"
  TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
  FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">DEC-97</FILTER_VALUE>
  </FILTER>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="VENDOR_TYPE"
  TABLE_ALIAS="VENDOR_D" FILTER_PREC_OPER="AND" FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">EMPLOYEE</
  FILTER_VALUE>
  </FILTER>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="COMPANY_KEY"
  TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
  FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">01</FILTER_VALUE>
  </FILTER>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="DEPARTMENT_KEY"
  TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
  FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">560</FILTER_VALUE>
  </FILTER>
</DETAIL_FILTERS>
<AGGREGATE_FILTERS>
  <FILTER FILTER_TYPE="VALUE"
  COLUMN_TEXT="SUM(INVOICE_LINE_AMOUNT)" TABLE_ALIAS="AP_INV_DETAIL_F"
  FILTER_PREC_OPER="AND" FILTER_OPERATOR=">">
    <FILTER_VALUE VALUE_DATA_TYPE="NUMBER">0</FILTER_VALUE>
  </FILTER>
</AGGREGATE_FILTERS>
</DP_QUERY_DEF>
```

FIG. 23A

2301

```
- <DP_SCHEMA_DOC VERSION="1">
  <DPA_QUERY_SERVER_INFO SERVICE="DPA_QUERY_SERVER"
    MACHINE="EXH_2K" PORT="8069"
    WAREHOUSE_SERVER="HD.DPAPPLICATIONS.COM"
    WAREHOUSE_DBNAME="DEMO30" WAREHOUSE_OWNER="RROC"
    SCHEMA="AP_INV_DETAIL_F" DATA_SET="NW">FOODADDY</
  DPA_QUERY_SERVER_INFO>
- <DP_DIMENSIONS>
- <DIMENSION LABEL="ACCOUNTING DATE" NAME="ACCOUNTING_DATE_D">
  <ATTRIBUTE LABEL="ACCOUNTING DATE KEY"
  NAME="ACCOUNTING_DATE_KEY" />
  <ATTRIBUTE LABEL="ACCOUNTING MONTH" NAME="ACCOUNTING_MONTH" />
  <ATTRIBUTE LABEL="ACCOUNTING PERIOD" NAME="ACCOUNTING_PERIOD" />
  <ATTRIBUTE LABEL="ACCOUNTING PERIOD KEY"
  NAME="ACCOUNTING_PERIOD_KEY" />
  <ATTRIBUTE LABEL="ACCOUNTING PERIOD QUARTER"
  NAME="ACCOUNTING_PERIOD_QUARTER" />
  <ATTRIBUTE LABEL="ACCOUNTING QUARTER"
  NAME="ACCOUNTING_QUARTER" />
  <ATTRIBUTE LABEL="ACCOUNTING WEEK ENDING"
  NAME="ACCOUNTING_WEEK_ENDING" />
  <ATTRIBUTE LABEL="ACCOUNTING YEAR" NAME="ACCOUNTING_YEAR" />
</DIMENSION>
- <DIMENSION LABEL="ACCOUNT" NAME="ACCOUNT_D">
  <ATTRIBUTE LABEL="ACCOUNT" NAME="ACCOUNT" />
  <ATTRIBUTE LABEL="LINE NAME" NAME="LINE_NAME" />
  <ATTRIBUTE LABEL="LINE SEQUENCE KEY" NAME="LINE_SEQUENCE_KEY" />
  <ATTRIBUTE LABEL="REPORT SECTION" NAME="REPORT_SECTION" />
  <ATTRIBUTE LABEL="REPORT SEQUENCE" NAME="REPORT_SEQUENCE" />
  <ATTRIBUTE LABEL="ACCOUNT KEY" NAME="ACCOUNT_KEY" />
  <ATTRIBUTE LABEL="ACCOUNT DESCRIPTION" NAME="ACCOUNT_DESC" />
</DIMENSION>
- <DIMENSION LABEL="ACCOUNT ROLLUPS" NAME="ACCOUNT_RLUP_D">
  <ATTRIBUTE LABEL="ACCOUNT" NAME="ACCOUNT" />
  <ATTRIBUTE LABEL="ACCOUNT KEY" NAME="ACCOUNT_KEY" />
  <ATTRIBUTE LABEL="ACCOUNT ROLLUP DESCRIPTION"
  NAME="ROLLUP_DESC" />
  <ATTRIBUTE LABEL="ACCOUNT ROLLUP CODE" NAME="ROLLUP_CODE" />
  <ATTRIBUTE LABEL="ACCOUNT DESCRIPTION" NAME="ACCOUNT_DESC" />
</DIMENSION>
```

FIG. 23B

2302

```
- <DIMENSION LABEL="AP HOLD CODES" NAME="AP_HOLD_CODE_D">
  <ATTRIBUTE LABEL="AP HOLD CODE" NAME="AP_HOLD_CODE" />
  <ATTRIBUTE LABEL="AP HOLD CODE DESCRIPTION"
  NAME="AP_HOLD_CODE_DESC" />
  <ATTRIBUTE LABEL="AP HOLD CODE KEY" NAME="AP_HOLD_CODE_KEY" />
  <ATTRIBUTE LABEL="AP HOLD CODE TYPE" NAME="AP_HOLD_CODE_TYPE" />
</DIMENSION>
- <DIMENSION LABEL="AP HOLD STATUS" NAME="AP_HOLD_STATUS_D">
  <ATTRIBUTE LABEL="AP HOLD STATUS" NAME="AP_HOLD_STATUS" />
  <ATTRIBUTE LABEL="AP HOLD STATUS KEY" NAME="AP_HOLD_STATUS_KEY" />
>
</DIMENSION>
- <DIMENSION LABEL="AP INVOICES" NAME="AP_INVOICE_D">
  <ATTRIBUTE LABEL="AP INVOICE NUMBER" NAME="AP_INVOICE" />
  <ATTRIBUTE LABEL="AP INVOICE DATE" NAME="AP_INVOICE_DATE" />
  <ATTRIBUTE LABEL="AP INVOICE KEY" NAME="AP_INVOICE_KEY" />
</DIMENSION>
- <DIMENSION LABEL="AP INVOICE TYPES" NAME="AP_INVOICE_TYPE_D">
  <ATTRIBUTE LABEL="AP INVOICE TYPE" NAME="AP_INVOICE_TYPE" />
  <ATTRIBUTE LABEL="AP INVOICE TYPE KEY" NAME="AP_INVOICE_TYPE_KEY" />
>
</DIMENSION>
- <DIMENSION LABEL="AP PAYMENT TERMS" NAME="AP_PAYMENT_TERM_D">
  <ATTRIBUTE LABEL="AP PAYMENT TERM" NAME="AP_PAYMENT_TERM" />
  <ATTRIBUTE LABEL="AP PAYMENT TERM DESCRIPTION"
  NAME="AP_PAYMENT_TERM_DESC" />
  <ATTRIBUTE LABEL="AP PAYMENT TERM KEY"
  NAME="AP_PAYMENT_TERM_KEY" />
</DIMENSION>
- <DIMENSION LABEL="PO AUTHORIZER" NAME="AUTHORIZER_D">
  <ATTRIBUTE LABEL="AUTHORIZER" NAME="AUTHORIZER" />
  <ATTRIBUTE LABEL="AUTHORIZER KEY" NAME="AUTHORIZER_KEY" />
</DIMENSION>
- <DIMENSION LABEL="BUYERS" NAME="BUYER_D">
  <ATTRIBUTE LABEL="BUYER" NAME="BUYER" />
  <ATTRIBUTE LABEL="AUTHORIZATION LIMIT"
  NAME="BUYER_AUTHORIZATION_LIMIT" />
  <ATTRIBUTE LABEL="END DATE ACTIVE" NAME="BUYER_END_DATE_ACTIVE" />
  <ATTRIBUTE LABEL="BUYER KEY" NAME="BUYER_KEY" />
  <ATTRIBUTE LABEL="START DATE ACTIVE"
  NAME="BUYER_START_DATE_ACTIVE" />
</DIMENSION>
```

FIG. 23C

2303

```
<dimension label="COMPANY" name="COMPANY_D">
  <attribute label="COMPANY" name="COMPANY" />
  <attribute label="COMPANY DESCRIPTION" name="COMPANY_DESC" />
  <attribute label="COMPANY KEY" name="COMPANY_KEY" />
</dimension>
<dimension label="CURRENCY" name="CURRENCY_D">
  <attribute label="CURRENCY" name="CURRENCY" />
  <attribute label="CURRENCY DESCRIPTION" name="CURRENCY_DESC" />
  <attribute label="CURRENCY KEY" name="CURRENCY_KEY" />
</dimension>
<dimension label="DEPARTMENT" name="DEPARTMENT_D">
  <attribute label="DEPARTMENT" name="DEPARTMENT" />
  <attribute label="DEPARTMENT KEY" name="DEPARTMENT_KEY" />
  <attribute label="DEPARTMENT DESCRIPTION" name="DEPARTMENT_DESC" />
>
</dimension>
<dimension label="DEPARTMENT ROLLUPS" name="DEPARTMENT_RLUP_D">
  <attribute label="DEPARTMENT" name="DEPARTMENT" />
  <attribute label="DEPARTMENT ROLLUP DESC" name="ROLLUP_DESC" />
  <attribute label="DEPARTMENT ROLLUP CODE" name="ROLLUP_CODE" />
  <attribute label="DEPARTMENT DESCRIPTION" name="DEPARTMENT_DESC" />
>
<attribute label="DEPARTMENT KEY" name="DEPARTMENT_KEY" />
</dimension>
<dimension label="AP DUE DATES" name="DUE_DATE_D">
  <attribute label="DUE DATE KEY" name="DUE_DATE_KEY" />
  <attribute label="DUE MONTH" name="DUE_MONTH" />
  <attribute label="DUE PERIOD" name="DUE_PERIOD" />
  <attribute label="DUE PERIOD KEY" name="DUE_PERIOD_KEY" />
  <attribute label="DUE PERIOD QUARTER" name="DUE_PERIOD_QUARTER" />
  <attribute label="DUE QUARTER" name="DUE_QUARTER" />
  <attribute label="DUE WEEK ENDING" name="DUE_WEEK_ENDING" />
  <attribute label="DUE YEAR" name="DUE_YEAR" />
</dimension>
<dimension label="INVOICE DATES" name="INVOICE_DATE_D">
  <attribute label="INVOICE DATE KEY" name="INVOICE_DATE_KEY" />
  <attribute label="INVOICE MONTH" name="INVOICE_MONTH" />
  <attribute label="INVOICE PERIOD" name="INVOICE_PERIOD" />
  <attribute label="INVOICE PERIOD KEY" name="INVOICE_PERIOD_KEY" />
  <attribute label="INVOICE PERIOD QUARTER" name="INVOICE_PERIOD_QUARTER" />
  <attribute label="INVOICE QUARTER" name="INVOICE_QUARTER" />
  <attribute label="INVOICE WEEK ENDING" name="INVOICE_WEEK_ENDING" />
  <attribute label="INVOICE YEAR" name="INVOICE_YEAR" />
</dimension>
```

FIG. 23D

- <dimension label="JE BATCHS" name="JE_BATCH_D">
<attribute label="ACTUAL FLAG" name="ACTUAL_FLAG" />
<attribute label="DEFAULT PERIOD NAME"
name="DEFAULT_PERIOD_NAME" />
<attribute label="JE BATCH KEY" name="JE_BATCH_KEY" />
<attribute label="NAME" name="NAME" />
<attribute label="ORG ID" name="ORG_ID" />
<attribute label="DESCRIPTION" name="DESCRIPTION" />
<attribute label="DATE CREATED" name="DATE_CREATED" />
</dimension>
- <dimension label="ORGANIZATIONS" name="ORGANIZATION_D">
<attribute label="ORGANIZATION" name="ORGANIZATION" />
<attribute label="ORGANIZATION KEY" name="ORGANIZATION_KEY" />
<attribute label="ORGANIZATION TYPE" name="ORGANIZATION_TYPE" />
</dimension>
- <dimension label="PA PROJECTS" name="PA_PROJECT_D">
<attribute label="PROJECT KEY" name="PA_PROJECT_KEY" />
<attribute label="PROJECT COMPLETE DATE"
name="PROJECT_COMPLETE_DATE" />
<attribute label="PROJECT MANAGER" name="PROJECT_MANAGER" />
<attribute label="PROJECT NAME" name="PROJECT_NAME" />
<attribute label="PROJECT NUMBER" name="PROJECT_NUMBER" />
<attribute label="PROJECT OFFICER" name="PROJECT_OFFICER" />
<attribute label="PROJECT SPONSOR" name="PROJECT_SPONSOR" />
<attribute label="PROJECT START DATE" name="PROJECT_START_DATE" />
<attribute label="PROJECT STATUS" name="PROJECT_STATUS" />
<attribute label="PROJECT TITLE" name="PROJECT_TITLE" />
<attribute label="PROJECT TYPE" name="PROJECT_TYPE" />
</dimension>
- <dimension label="PA TASKS" name="PA_TASK_D">
<attribute label="PARENT TASK KEY" name="PARENT_TASK_KEY" />
<attribute label="TASK LOCATION" name="TASK_LOCATION" />
<attribute label="TASK NAME" name="TASK_NAME" />
<attribute label="TASK MANAGER" name="TASK_MANAGER" />
<attribute label="TOP TASK NAME" name="TOP_TASK_NAME" />
<attribute label="TOP TASK KEY" name="TOP_TASK_KEY" />
<attribute label="TASK WBS" name="TASK_WBS" />
<attribute label="TASK START DATE" name="TASK_START_DATE" />
<attribute label="TASK NUMBER" name="TASK_NUMBER" />
<attribute label="TASK DESCRIPTION" name="TASK_DESC" />
<attribute label="PARENT TASK NAME" name="PARENT_TASK_NAME" />
<attribute label="PROJECT KEY" name="PA_PROJECT_KEY" />
<attribute label="TASK COMPLETE DATE" name="TASK_COMPLETE_DATE" />
>
<attribute label="TASK KEY" name="PA_TASK_KEY" />
</dimension>

2304

FIG. 23E

2305

```
- <dimension label="PERIODS" name="PERIOD_D">
  <attribute label="PERIOD" name="PERIOD" />
  <attribute label="PERIOD END DATE" name="PERIOD_END_DATE" />
  <attribute label="PERIOD KEY" name="PERIOD_KEY" />
  <attribute label="PERIOD START DATE" name="PERIOD_START_DATE" />
  <attribute label="PERIOD TYPE" name="PERIOD_TYPE" />
  <attribute label="QUARTER" name="QUARTER" />
  <attribute label="YEAR" name="YEAR" />
</dimension>
- <dimension label="PRODUCT" name="PRODUCT_D">
  <attribute label="PRODUCT" name="PRODUCT" />
  <attribute label="PRODUCT DESCRIPTION" name="PRODUCT_DESC" />
  <attribute label="PRODUCT KEY" name="PRODUCT_KEY" />
</dimension>
- <dimension label="PA PROJECT CLASSES" name="PROJECT_CLASS_D">
  <attribute label="PROJECT CLASS CATEGORY"
  name="PROJECT_CLASS_CATEGORY" />
  <attribute label="PROJECT CLASS CODE" name="PROJECT_CLASS_CODE" />
>
  <attribute label="PROJECT CLASS DESCRIPTION"
  name="PROJECT_CLASS_DESCRIPTION" />
  <attribute label="PROJECT KEY" name="PROJECT_KEY" />
</dimension>
- <dimension label="PO REQUESTORS" name="REQUESTOR_D">
  <attribute label="REQUESTOR" name="REQUESTOR" />
  <attribute label="REQUESTOR KEY" name="REQUESTOR_KEY" />
</dimension>
- <dimension label="SUB-ACCOUNT" name="SUB_ACCOUNT_D">
  <attribute label="SUB-ACCOUNT" name="SUB_ACCOUNT" />
  <attribute label="SUB-ACCOUNT KEY" name="SUB_ACCOUNT_KEY" />
  <attribute label="SUB-ACCOUNT DESCRIPTION"
  name="SUB_ACCOUNT_DESC" />
</dimension>
- <dimension label="AP VENDORS" name="VENDOR_D">
  <attribute label="ACTIVE END DATE" name="ACTIVE_END_DATE" />
  <attribute label="ACTIVE FLAG" name="ACTIVE_FLAG" />
  <attribute label="ACTIVE START DATE" name="ACTIVE_START_DATE" />
  <attribute label="VENDOR SITE ADDRESS LINE1" name="ADDRESS_LINE1" />
  <attribute label="VENDOR SITE ADDRESS LINE2" name="ADDRESS_LINE2" />
  <attribute label="VENDOR SITE ADDRESS LINE3" name="ADDRESS_LINE3" />
  <attribute label="VENDOR SITE AREA CODE" name="AREA_CODE" />
  <attribute label="VENDOR SITE CITY" name="CITY" />
  <attribute label="VENDOR HOLD REASON" name="HOLD_REASON" />
  <attribute label="VENDOR SITE PHONE NUMBER" name="PHONE_NUMBER" />
>
```

FIG. 23F

2306

```
<ATTRIBUTE LABEL="VENDOR SITE PROVINCE" NAME="PROVINCE" />
<ATTRIBUTE LABEL="VENDOR SITE STATE" NAME="STATE" />
<ATTRIBUTE LABEL="VENDOR TAX FEDERAL FLAG"
NAME="TAX_FEDERAL_REPORT_FLAG" />
<ATTRIBUTE LABEL="VENDOR TAX REPORTING NAME"
NAME="TAX_REPORTING_NAME" />
<ATTRIBUTE LABEL="VENDOR TAX STATE FLAG"
NAME="TAX_STATE_REPORT_FLAG" />
<ATTRIBUTE LABEL="VENDOR 1099 NUMBER" NAME="VENDOR_1099_NUM" />
<ATTRIBUTE LABEL="VENDOR 1099 TYPE" NAME="VENDOR_1099_TYPE" />
<ATTRIBUTE LABEL="VENDOR CORPORATE GROUP"
NAME="VENDOR CORPORATE_GROUP" />
<ATTRIBUTE LABEL="VENDOR INDUSTRY CLASS"
NAME="VENDOR_INDUSTRY_CLASS" />
<ATTRIBUTE LABEL="VENDOR KEY" NAME="VENDOR_KEY" />
<ATTRIBUTE LABEL="VENDOR NAME" NAME="VENDOR_NAME" />
<ATTRIBUTE LABEL="VENDOR NUMBER" NAME="VENDOR_NUMBER" />
<ATTRIBUTE LABEL="VENDOR ORGANIZATION TYPE"
NAME="VENDOR_ORG_TYPE" />
<ATTRIBUTE LABEL="VENDOR PAYMENT PRIORITY"
NAME="VENDOR_PAYMENT_PRIORITY" />
<ATTRIBUTE LABEL="VENDOR PAY GROUP" NAME="VENDOR_PAY_GROUP" />
<ATTRIBUTE LABEL="VENDOR SITE CODE" NAME="VENDOR_SITE_CODE" />
<ATTRIBUTE LABEL="VENDOR SITE KEY" NAME="VENDOR_SITE_KEY" />
<ATTRIBUTE LABEL="VENDOR TYPE" NAME="VENDOR_TYPE" />
<ATTRIBUTE LABEL="VENDOR SITE ZIP" NAME="ZIP" />
</DIMENSION>
- <DIMENSION LABEL="AP INVOICE DETAILS" NAME="AP_INV_DETAIL_F">
<ATTRIBUTE LABEL="ACCOUNTING DATE" NAME="ACCOUNTING_DATE" />
<ATTRIBUTE LABEL="ACCOUNTING DATE KEY" NAME="ACCOUNTING_DATE_KEY" />
<ATTRIBUTE LABEL="ACCOUNT KEY" NAME="ACCOUNT_KEY" />
<ATTRIBUTE LABEL="APPROVAL STATUS" NAME="APPROVAL_STATUS" />
<ATTRIBUTE LABEL="AP INVOICE KEY" NAME="AP_INVOICE_KEY" />
<ATTRIBUTE LABEL="AP INVOICE TYPE KEY" NAME="AP_INVOICE_TYPE_KEY" />
<ATTRIBUTE LABEL="AP PAYMENT TERM KEY" NAME="AP_PAYMENT_TERM_KEY" />
<ATTRIBUTE LABEL="BUYER KEY" NAME="BUYER_KEY" />
<ATTRIBUTE LABEL="COMPANY KEY" NAME="COMPANY_KEY" />
<ATTRIBUTE LABEL="INVOICE CURRENCY CODE" NAME="CURRENCY_KEY" />
<ATTRIBUTE LABEL="DEPARTMENT KEY" NAME="DEPARTMENT_KEY" />
<ATTRIBUTE LABEL="DUE DATE" NAME="DUE_DATE" />
<ATTRIBUTE LABEL="DUE DATE KEY" NAME="DUE_DATE_KEY" />
<ATTRIBUTE LABEL="TOTAL INVOICE AMOUNT" NAME="INVOICE_AMOUNT" />
```

FIG. 23G

2307

```
<ATTRIBUTE LABEL="INVOICE DATE" NAME="INVOICE_DATE" />
<ATTRIBUTE LABEL="INVOICE DATE KEY" NAME="INVOICE_DATE_KEY" />
<ATTRIBUTE LABEL="INVOICE DESCRIPTION" NAME="INVOICE_DESC" />
<ATTRIBUTE LABEL="INVOICE ID KEY" NAME="INVOICE_ID_KEY" />
<ATTRIBUTE LABEL="INVOICE LINE DESCRIPTION"
NAME="INVOICE_LINE_DESC" />
<ATTRIBUTE LABEL="INVOICE LINE NUMBER" NAME="INVOICE_LINE_NUMBER" />
>
<ATTRIBUTE LABEL="INVOICE LINE TYPE" NAME="INVOICE_LINE_TYPE" />
<ATTRIBUTE LABEL="INVOICE NUMBER" NAME="INVOICE_NUMBER" />
<ATTRIBUTE LABEL="INVOICE TAX AMOUNT" NAME="INVOICE_TAX_AMOUNT" />
<ATTRIBUTE LABEL="ORGANIZATION KEY" NAME="ORGANIZATION_KEY" />
<ATTRIBUTE LABEL="PAID AMOUNT" NAME="PAID_AMOUNT" />
<ATTRIBUTE LABEL="PA PROJECT KEY" NAME="PA_PROJECT_KEY" />
<ATTRIBUTE LABEL="PA TASK KEY" NAME="PA_TASK_KEY" />
<ATTRIBUTE LABEL="PERIOD KEY" NAME="PERIOD_KEY" />
<ATTRIBUTE LABEL="POSTED FLAG" NAME="POSTED_FLAG" />
<ATTRIBUTE LABEL="PO CREATION DATE" NAME="PO_CREATED_DATE" />
<ATTRIBUTE LABEL="PO NUMBER" NAME="PO_NUMBER" />
<ATTRIBUTE LABEL="PRODUCT KEY" NAME="PRODUCT_KEY" />
<ATTRIBUTE LABEL="RECURRING INVOICE FLAG"
NAME="RECURRING_INVOICE_FLAG" />
<ATTRIBUTE LABEL="SUB-ACCOUNT KEY" NAME="SUB_ACCOUNT_KEY" />
<ATTRIBUTE LABEL="TRANSLATED CURRENCY CODE"
NAME="TRANSLATED_CURRENCY_CODE" />
<ATTRIBUTE LABEL="VENDOR KEY" NAME="VENDOR_KEY" />
</DIMENSION>
</DP_DIMENSIONS>
- <MEASURES LABEL="AP INVOICE DETAILS" NAME="AP_INV_DETAIL_F">
  <MEASURE LABEL="ACCOUNTING (PRE-AP) LAG DAYS"
NAME="ACCOUNTING_LAG_DAYS" />
  <MEASURE LABEL="INVOICE LINE AMOUNT" NAME="INVOICE_LINE_AMOUNT" />
  <MEASURE LABEL="INVOICE LINE EXCHANGE RATE VARIANCE"
NAME="INVOICE_LINE_EXCH_RATE_VAR" />
  <MEASURE LABEL="INVOICE LINE PRICE VARIANCE"
NAME="INVOICE_LINE_PRICE_VARIANCE" />
  <MEASURE LABEL="NUMBER OF INVOICE LINES"
NAME="NUMBER_INVOICE_LINES" />
  <MEASURE LABEL="TRANSLATED CURRENCY AMOUNT"
NAME="TRANSLATED_CURRENCY_AMOUNT" />
  <MEASURE LABEL="UNPAID AMOUNT" NAME="UNPAID_AMOUNT" />
</MEASURES>
</DP_SCHEMA_DOC>
```

FIG. 24

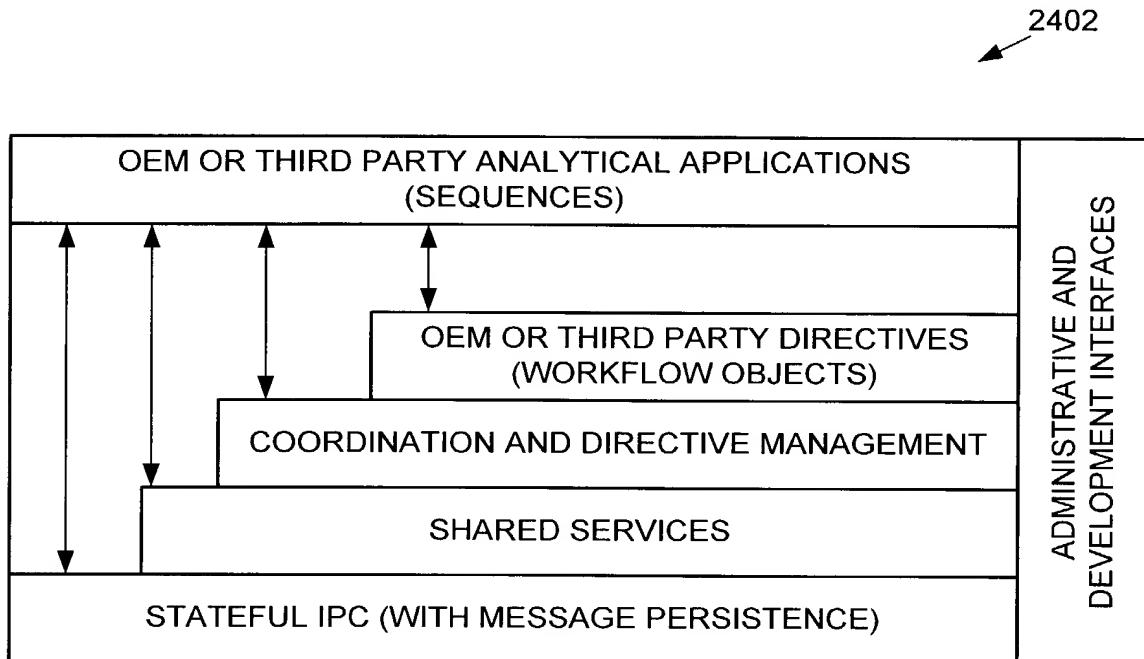
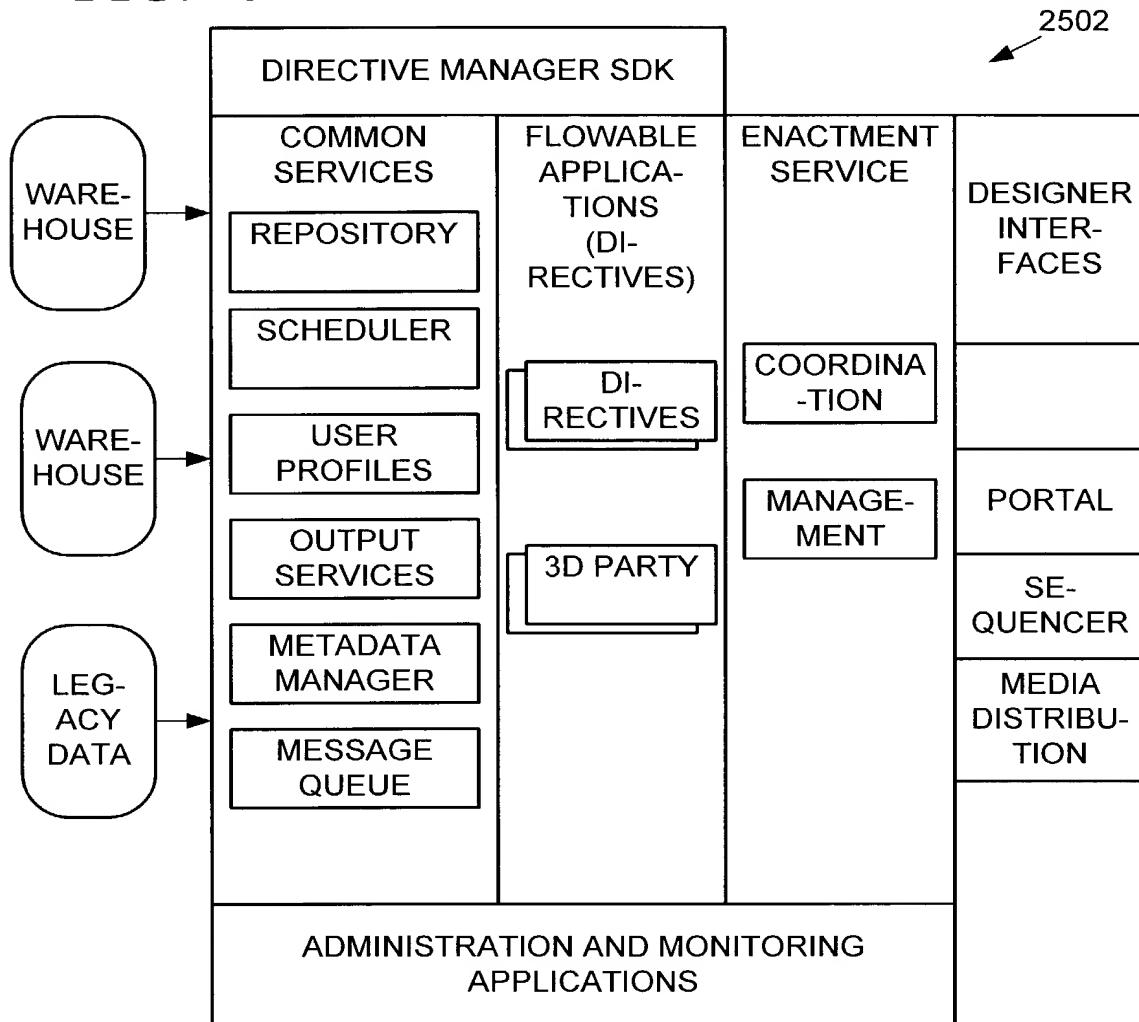


FIG. 25



Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No.: 6115-58351, Page 103 of 103

FIG. 26

